

FHWA-Indiana Environmental Document
CATEGORICAL EXCLUSION / ENVIRONMENTAL ASSESSMENT FORM
GENERAL PROJECT INFORMATION

Road No./County:

State Road (SR) 32 / Boone County

Designation Number(s):

Lead Designation (Des.) Number (No.) 1800060

Also includes Des. Nos. 1900361, 2101655, 2201196, 2201195, 2201194, 2201193, 2201192, 2201191, 2201190, 2201189, 2201188, and 2201187

Project
Description/Termini:

Roadway Improvement Project / From 3.69 miles west of SR 75 to 0.5 mile west of Interstate (I)-65

X	Categorical Exclusion, Level 2 – Required Signatories: INDOT DE and/or INDOT ESD
	Categorical Exclusion, Level 3 – Required Signatories: INDOT ESD
	Categorical Exclusion, Level 4 – Required Signatories: INDOT ESD and FHWA
	Environmental Assessment (EA) – Required Signatories: INDOT ESD and FHWA
	Additional Investigation (AI) – The proposed action included a design change from the original approved environmental document. Required Signatories must include the appropriate environmental approval authority

Approval

INDOT DE Signature and Date

INDOT ESD Signature and Date

FHWA Signature and Date

Release for Public Involvement

RZK
INDOT DE Initials and Date

April 6, 2023

INDOT ESD Initials and Date

Certification of Public Involvement

INDOT Consultant Services Signature and Date

INDOT DE/ESD Reviewer Signature and Date:

Ryan Silvers

February 13, 2023

Name and Organization of CE/EA Preparer:

Harlan Ford/RQAW

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Note: Refer to the most current INDOT CE Manual, guidance language, and other ESD resources for further guidance regarding any section of this form.

Part I – Public Involvement

Every Federal action requires some level of public involvement, providing for early and continuous opportunities throughout the project development process. **The level of public involvement should be commensurate with the proposed action.**

	Yes	No
Does the project have a historic bridge processed under the Historic Bridges PA*?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If No, then: Opportunity for a Public Hearing Required?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

*A public hearing is required for all historic bridges processed under the Historic Bridges Programmatic Agreement between INDOT, FHWA, SHPO, and the ACHP.

Discuss what public involvement activities (legal notices, letters to affected property owners and residents (i.e. notice of entry), meetings, special purpose meetings, newspaper articles, etc.) have occurred for this project.

Notice of Entry Letters

Notice of Entry letters were mailed to potentially affected property owners near the project area on March 23, 2020, notifying them about the project and that individuals responsible for land surveying and field activities may be seen in the area. A sample copy of the Notice of Entry letter is included in Appendix G, page G1.

Public Informational Meeting

Notice of Public Information Meeting invitation letters were mailed to all nearby property owners within the project area on April 5, 2022 (Appendix G, pages G2 to G3). A legal notice advertising the public informational meeting was published in the *Lebanon Reporter* newspaper on April 12, 2022, and again the following week on April 19, 2022 (Appendix G, pages G4 to G5). The public informational meeting was held on April 25, 2022, at the Western Boone Junior-Senior High School located at 1205 IN-75, Thorntown, IN 46071. The meeting described the project scope and schedule and solicited input and comments from the community. Generally, the public did not express particular interest in the project as proposed but was more concerned about intersection improvements and whether they would occur at County Road (CR) 500 West/SR 32 and at the SR 75/SR 32 intersections. These intersection improvements will not be included as part of this project. All public comments received were verbal and no written comments were received. The sign in sheets, and presentation presented during the meeting are attached in Appendix G, pages G6 to G22.

Opportunity for a Public Hearing

The project will meet the minimum requirements described in the current *Indiana Department of Transportation (INDOT) Public Involvement Manual* which requires the project sponsor to offer the public an opportunity to submit comments and/or request a public hearing. INDOT Crawfordsville district, as the project sponsor, has decided to forgo offering the public an opportunity to request a public hearing and has elected to hold a public hearing. A legal notice of public hearing will appear in a local publication contingent upon the release of this document for public involvement. This document will be revised after the public involvement requirements are fulfilled.

Public Controversy on Environmental Grounds

Discuss public controversy concerning community and/or natural resource impacts, including what is being done during the project to minimize impacts.

At this time, there is no substantial public controversy concerning impacts to the community or to natural resources.

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Part II - General Project Identification, Description, and Design Information

Sponsor of the Project: INDOT INDOT District: CrawfordsvilleLocal Name of the Facility: SR 32Funding Source (mark all that apply): Federal ☒ State ☒ Local ☐ Other* ☐

*If other is selected, please identify the funding source: _____

PURPOSE AND NEED:

The need should describe the specific transportation problem or deficiency that the project will address. The purpose should describe the goal or objective of the project. The solution to the traffic problem should NOT be discussed in this section.

Need

The need for this project stems from the Level of Service (LOS) along this section of SR 32, which is predicted to drop from a LOS C to a LOS D by 2044. There are six levels of service ranging from A to F. LOS A represents the best operating conditions from the traveler's perspective and LOS F the worst. In addition, there is a need to correct the deteriorating pavement condition, which is currently exhibiting signs of wheel rutting, longitudinal cracking, and large amounts of crack sealing from previous repairs. Crack sealant helps to temporarily reduce water infiltration, but when water penetrates the crack sealant it will lead to substantial damage to the pavement structure. Please refer to the Abbreviated Engineer's Assessment dated, December 08, 2020, in Appendix I, pages I8 to I16 and the amended Engineers Report, dated February 8, 2023, in Appendix I, pages I17 to I19. Lastly, at the gas station located on the southwest corner of the SR 32/SR 75 intersection, there is currently no defined entrance/exit for the gas station. This results in confusion for motorist entering and exiting the gas station, and it creates conflicts for motorist accessing SR 32 from SR 75. Please see the attached Mini-Scope, prepared by INDOT on October 18, 2021, in Appendix I, pages I20 to I23.

Purpose

The purpose of this project is to maintain the LOS C for the design year 2044. In addition, the purpose is to restore the rideability of the pavement, and to improve access control at the gas station in the southwest quadrant of the SR 32/SR75 intersection.

PROJECT DESCRIPTION (PREFERRED ALTERNATIVE):

County: Boone Municipality: SR 32Limits of Proposed Work: From 3.69 miles west of SR 75 to 0.5 mile west of I-65Total Work Length: 8.66 Mile(s) Total Work Area: 52 Acre(s)Is an Interstate Access Document (IAD)¹ required?

If yes, when did the FHWA provide a Determination of Engineering and Operational Acceptability?

¹If an IAD is required; a copy of the approved CE/EA document must be submitted to the FHWA with a request for final approval of the IAD.

Yes ¹	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>
Date: _____	

Describe location of project including township, range, city, county, roads, etc. Existing conditions should include current conditions, current deficiencies, roadway description, surrounding features, etc. Preferred alternative should include the scope of work, anticipated impacts, and how the project will meet the Purpose and Need. Logical termini and independent utility also need discussed.

The INDOT Crawfordsville District and the Federal Highway Administration (FHWA) intend to proceed with a roadway improvement project along SR 32 in Boone County, Indiana.

Location

This project is located on SR 32 and extends from 3.69 miles west of SR 75 to 0.5 mile west of I-65 for a total work length of _____

This is page 3 of 27 Project name: SR 32: Roadway Improvement Project Date: April 4, 2023

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approximately 8.66 miles. The project is further described as being within Jefferson and Center Civil Townships within Sections 28, 29, 30, 31, 32, 33, 34, and 35 of Township 19 North, Range 1 West and Sections 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, and 36 of Township 19 North, Range 2 West. Specifically, the project is located within Shannondale, Hazelrigg, and Lebanon U.S. Geological Survey (USGS) Quadrangles. Please refer to Appendix B, pages B1 to B4 for project location maps.

Existing Conditions

SR 32 is classified as a Rural Minor Arterial roadway and is not part of the National Highway System (NHS) but is part of the National Truck Network (NTN) as it serves as a connector route between I-65 and I-74. Currently, SR 32 between Shannondale and Lebanon is about 8.5 miles long and averages approximately 32% no passing zones. The percent time spent following ranges from 57% to 66% and is projected to increase to 67% to 75% in 20 years. If nothing is done to this roadway, it is expected that the roadway LOS will drop from a C to a D by 2044. Within the project area, SR 32 consists of two 12-foot-wide travel lanes with a 3-foot-wide usable shoulder (2-foot-paved). As the project is located within a rural area, there are no pedestrian facilities present such as, sidewalks, Americans with Disabilities Act (ADA) curb ramps, crosswalks, etc. Existing drainage is conveyed by roadside ditches and small culverts/pipes. The primary land use within the project area consists of agricultural and residential properties. In addition, there are fragmented stands of trees throughout the project area that would be considered suitable summer habitat for bat species. Furthermore, two cemeteries (Dover Cemetery and Pleasant View Cemetery), the Western Boone Junior-Senior High School, and a gas station (southwest quadrant of SR 32/SR 75 intersection) are located adjacent to the project area as well. At the gas station, there is very little access control, which creates conflicts for motorists accessing SR 32 from SR 75.

Preferred Alternative

The preferred alternative involves a functional Hot Mix Asphalt (HMA) minor structural overlay along SR 32 and the addition of three passing lanes (two eastbound (EB) and one westbound (WB)) that will each be approximately one mile long. The three passing lanes will be constructed in three separate locations as shown in the project location and topo maps in Appendix B, pages B1 to B4.

HMA Overlay Project Limits:

The limits of the HMA overlay portion of the project (Des. No. 1900361) extends from 0.05 mile west of SR 75 to 0.5 mile west of I-65.

Passing Lanes Project Limits:

The limits of the added passing lanes portion of this project (Des. No. 1800060) extends from 3.69 miles west of SR 75 to 1.41 miles east of SR 75.

- Eastbound Passing Lane 1: Begins approximately 3.69 miles west of SR 75 and ends approximately 2.66 miles west of SR 75.
- Westbound Passing Lane 1: Begins approximately 0.47 mile west of SR 75 and ends approximately 1.48 miles west of SR 75.
- Eastbound Passing Lane 2: Begins approximately 0.30 mile east of SR 75 and ends approximately 1.41 miles east of SR 75.

In total, the proposed improvements will involve 6.62 miles of mill and resurface with approximately three miles of added passing lanes. Please note that the net project length is 8.66 miles, as one passing lane (Eastbound Passing Lane 2) is within the HMA overlay limits, while the other two are outside the HMA overlay limits. New ditches will need to be established within the passing lane areas. In the three areas where the passing lanes would be installed, the cross section would include two 12-foot-wide travel lanes, one 12-foot-wide passing lane, and 3-foot-wide paved shoulders. An additional 5-foot-wide aggregate shoulder will be installed along the passing lane for a total shoulder width of 8-foot. In addition, all small structures within the limits of the three passing lane locations will need to be replaced to facilitate the additional pavement width. Please refer to the below *Bridges and/or Small Structure(s)* section of this Categorical Exclusion (CE) document for a table of all structures and associated Des Nos. Lastly, Des No. 2101655 will include adding a curbed concrete island (approximately 6 inches in height) to better define the entrance to the gas station, located on the southwest corner of the SR 32/SR 75 intersection. Please refer to the project plans in Appendix B, pages B159 to B210.

Impact Summary

This project will require 4.10 acres of permanent and 2.01 acre of temporary right-of-way. This project will not result in any permanent or temporary stream/wetland impacts. This project will result in up to 0.80 acre of tree clearing/trimming. Lastly, utility relocations will likely be required in the passing lane locations, but exact details are not known at this time. If any utility relocations result in any additional environmental impacts that are not assessed in this environmental document, an Additional Information (AI) document will need to be prepared. A firm commitment to this effect has been added to the *Environmental Commitments* section of

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this CE document.

Logical Termini/Independent Utility

The termini for this project are logical as the HMA overlay portion (Des. No. 1900361) of the project begins 0.05 mile west of the SR 75 and SR 32 intersection, which is where the pavement begins to exhibit deficiencies such as wheel rutting, longitudinal cracking, and an abundance of crack sealing. The HMA overlay portion of the project ends at the west end of the bridge of Sanitary Creek (0.05 mile west of I-65), which is where the pavement deficiencies noted above end. The termini for the passing lanes portion of this project (Des. No. 1800060) are logical as they have been strategically placed (three in total (two eastbound and one westbound) and each approximately one mile in length) along this section of SR 32 from 3.69 miles west of SR 75 to 1.41 miles east of SR 75, to help maintain a LOS C for the year 2044. This project demonstrates independent utility as it is a standalone project that is not dependent upon any other projects to function.

Maintenance of Traffic

The Maintenance of Traffic (MOT) plan for this project is proposed to consist of phased construction to limit the impact to commuters during the passing lane construction. In addition, flagging operations are anticipated to be used during the HMA portion of the project after the construction of the passing lanes. Please refer to the below *Maintenance of Traffic (MOT) During Construction* section of this CE document for more details.

This project will meet the purpose and need of the project by providing passing lanes in order to maintain the LOS C for the year 2044. In addition, this project meets the purpose and need by providing an HMA overlay throughout the project limits which will restore the rideability of the existing pavement. Lastly, this project meets the purpose and need by installing a raised curbed island at the gas station (southwest quadrant of SR 75/ SR 32 intersection) to improve access control and eliminate conflicts for motorists accessing SR 32 from SR 75.

OTHER ALTERNATIVES CONSIDERED:

Provide a header for each alternative. Describe all discarded alternatives, including the No Build Alternative. Explain why each discarded alternative was not selected. Make sure to state how each alternative meets or does not meet the Purpose and Need and why.

The "No Build" Alternative (Alternative #1)

The "No-Build" alternative was considered for this proposed project. This alternative would eliminate any environmental impacts by utilizing the existing facility with no expenditure of capital funds for improvement. However, this alternative would not meet the purpose and need of the project and was eliminated from further consideration.

The No Build Alternative is not feasible, prudent or practicable because (Mark all that apply)

It would not correct existing capacity deficiencies;

It would not correct existing safety hazards;

It would not correct the existing roadway geometric deficiencies;

It would not correct existing deteriorated conditions and maintenance problems; or

It would result in serious impacts to the motoring public and general welfare of the economy.

Other (Describe):

☒☒☒

ROADWAY CHARACTER:

If the proposed action includes multiple roadways, complete and duplicate for each roadway.

Name of Roadway	<u>SR 32</u>			
Functional Classification:	<u>Rural Minor Arterial</u>			
Current ADT:	<u>9,595</u>	VPD (2020)	Design Year ADT:	<u>10, 825</u> VPD (2044)
Design Hour Volume (DHV):	<u>987</u>	Truck Percentage (%)	<u>23.22</u>	
Designed Speed (mph):	<u>55</u>	Legal Speed (mph):	<u>45-55</u>	

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Existing			Proposed		
Number of Lanes:	2		2-3		
Type of Lanes:	Travel		Travel and Passing		
Pavement Width:	30	ft.	30-42	ft.	
Shoulder Width:	3	ft.	3-8	ft.	
Median Width:	N/A	ft.	N/A	ft.	
Sidewalk Width:	N/A	ft.	N/A	ft.	

Setting: ☐ Urban ☐ Suburban ☒ Rural
 Topography: ☒ Level ☐ Rolling ☐ Hilly

BRIDGES AND/OR SMALL STRUCTURE(S):

If the proposed action includes multiple structures, complete and duplicate for each bridge and/or small structure. Include both existing and proposed bridge(s) and/or small structure(s) in this section.

Structure/NBI Number(s): See below table Sufficiency Rating: See below table
 (Rating, Source of Information)

Existing			Proposed		
Bridge/Structure Type:	N/A		N/A		
Number of Spans:	N/A		N/A		
Weight Restrictions:	N/A	ton	N/A	ton	
Height Restrictions:	N/A	ft.	N/A	ft.	
Curb to Curb Width:	N/A	ft.	N/A	ft.	
Outside to Outside Width:	N/A	ft.	N/A	ft.	
Shoulder Width:	N/A	ft.	N/A	ft.	

Describe impacts and work involving bridge(s), culvert(s), pipe(s), and small structure(s). Provide details for small structure(s): structure number, type, size (length and dia.), location and impacts to water. Use a table if the number of small structures becomes large. If the table exceeds a complete page, put it in the appendix and summarize the information below with a citation to the table.

This project proposes to replace the small structures listed in the below table. No water resources were identified or determined to be present at any of the structures proposed to be replaced. No work is anticipated to occur on any bridges associated with this project. All small structures were evaluated for any historical features such as stone or brick and was verified by INDOT Cultural Resources Office (CRO) office on October 18, 2021, and most recently on December 16, 2022, that none of these structures exhibit any historical characteristics (Appendix D, pages D1 to D8). Please refer to the below table for a list of all structures to be replaced as part of this project. No bats or evidence of bats were seen or heard at any of the structures during the most recent bat inspection on July 6, 2021, by RQAW (Appendix C, pages C55 to C66).

¹ INDOT Structure Number	² Des. No.	Structure No. Per Plans	Stream/Wetland Impacts	Existing Size/Type and Length	² Proposed Structure Size/Type and Length	Work Type	Culvert Condition Rating	Plan Sheet Reference
CV 032-006-53.63	2201194	123	N/A	Dual 1.25 ft. Concrete pipes (47 ft.)	7 ft. X 4 ft. Box (63 lft.)	Replacement	N/A	Appendix B, pages B199 and B208
CV 032-006-53.38	2201193	122	N/A	5 ft. X 3 ft. box (42 ft.)	10 ft. X 5 ft. Box (60 lft.)	Replacement	8 (INDOT BIAS Report)	Appendix B, pages B198 and B207

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CV 032-006-53.02	2201192	121	N/A	Dual 1 ft. Concrete pipes (47 ft.)	8 ft. X 4 ft. Box (60 ft.)	Replacement	N/A	Appendix B, pages B197 and B206
CLV-8739	N/A	120	N/A	18 inch Concrete pipe (44 ft.)	36 inch CMP (49 ft.)	Replacement	N/A	Appendix B, page B196
CV 032-006-51.88	2201191	112	N/A	18 inch Concrete Pipe (48 ft.)	5 ft. X 3 ft. Box (53 ft.)	Replacement	N/A	Appendix B, pages B195 and B205
CV 032-006-51.79	2201190	111	N/A	30 inch CMP (54 ft.)	5 ft. X 3 ft. Box (56 ft.)	Replacement	N/A	Appendix B, pages B195 and B204
CV 032-006-51.06	2201189	110	N/A	18 inch Concrete pipe (50 ft.)	4 ft. X 2 ft. Box (52 ft.)	Replacement	N/A	Appendix B, pages B192 and B203
CLV-9011	N/A	104	N/A	15 inch CMP with headwall (53 ft.)	36 inch CMP (65 ft.)	Replacement	N/A	Appendix B, page B190
CV 032-006-49.65	2201188	103	N/A	24 inch CMP (50 ft.)	4 ft. X 3 ft. Box (56 ft.)	Replacement	N/A	Appendix B, pages B190 and B202
CV 032-006-49.04	2201187	102	N/A	15 inch CMP (55 ft.)	3 ft. X 2 ft. Box (60 ft.)	Replacement	N/A	Appendix B, pages B188 and B201
CLV-9033	N/A	101	N/A	15 inch Concrete Pipe (48 ft.)	36 inch CMP (57 ft.)	Replacement	N/A	Appendix B, page B188

¹Please note that the culvert numbers listed in the above table are future culvert numbers that will be assigned to the culverts to be include in INDOT's Bridge Inspection Application System (BIAS) as they have a proposed diameter of greater than 48 inches.

²Please note that the Des. Nos. in the above table were determined necessary due to the proposed structure sizes. Any structure with a diameter of 36 inches or larger must have a Des. No. assigned.

Additionally, all drive pipes within the limits of the passing lanes will need to be replaced. Please refer to the below table for all drive pipes that will be replaced as part of the project. No bats or evidence of bats were seen or heard at any of the structures.

Structure No. Per Plans	Stream/Wetland Impacts	Proposed Structure Size/Type and Length	Work Type	Plan Sheet Reference
301	N/A	15" CMP (59 ft.)	Replacement	Appendix B, Page B188
302	N/A	15" CMP (49 ft.)	Replacement	Appendix B, Page B188

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303	N/A	15" CMP (33 lft.)	Replacement	Appendix B, Page B188
304	N/A	15" CMP (49 lft.)	Replacement	Appendix B, Page B189
305	N/A	15" CMP (57 lft.)	Replacement	Appendix B, Page B190
306	N/A	15" CMP (32 lft.)	Replacement	Appendix B, Page B190
307	N/A	15" CMP (60 lft.)	Replacement	Appendix B, Page B191
308	N/A	15" CMP (49 lft.)	Replacement	Appendix B, Page B194
309	N/A	24" CMP (56 lft.)	Replacement	Appendix B, Page B195
310	N/A	15" CMP (43 lft.)	Replacement	Appendix B, Page B197
311	N/A	15" CMP (49 lft.)	Replacement	Appendix B, Page B197
312	N/A	15" CMP (46 lft.)	Replacement	Appendix B, Page B198
313	N/A	15" CMP (75 lft.)	Replacement	Appendix B, Page B199
314	N/A	15" CMP (33 lft.)	Replacement	Appendix B, Page B199
315	N/A	15" CMP (47 lft.)	Replacement	Appendix B, Page B200

Additionally, there are 4 box culverts: CV 032-006-57.29, CV 032-006-54.47, CV 032-006-54.25, CV 032-006-53.90 and 1 bridge: Bridge No. 032-06-00583 D located within the project area. None of these structures will be impacted by this project, as all 4 box culverts are within the limits of the HMA overlay and the bridge is located where there is a pavement exception (Appendix B, page B185).

MAINTENANCE OF TRAFFIC (MOT) DURING CONSTRUCTION:

Is a temporary bridge proposed? Yes ☐ No ☒
 Is a temporary roadway proposed? Yes ☐ No ☒
 Will the project involve the use of a detour or require a ramp closure? (describe below) Yes ☐ No ☒
 Provisions will be made for access by local traffic and so posted. Yes ☒ No ☐
 Provisions will be made for through-traffic dependent businesses. Yes ☒ No ☐
 Provisions will be made to accommodate any local special events or festivals. Yes ☒ No ☐
 Will the proposed MOT substantially change the environmental consequences of the action? Yes ☐ No ☒
 Is there substantial controversy associated with the proposed method for MOT? Yes ☐ No ☒
 Will the project require a sidewalk, curb ramp, and/or bicycle lane closure? (describe below) Yes ☐ No ☒
 Provisions will be made for access by pedestrians and/or bicyclist and so posted (describe below). Yes ☐ No ☒

Discuss closures, detours, and/or facilities (if any) that will be provided for maintenance of traffic. Any known impacts from these temporary measures should be quantified to the extent possible, particularly with respect to properties such as Section 4(f) resources and wetlands. Discuss any pedestrian/bicycle closures. Any local concerns about access and traffic flow should be detailed as well.

The MOT plan for this project will consist of phased construction to limit the impact to commuters during construction of the passing lanes. A road closure or detour route is not anticipated. After the passing lanes are constructed, the HMA overlay can be constructed by utilizing flagging operations. Two-way traffic is anticipated to be maintained along SR 32. In addition, access to all properties will be maintained at all times during construction. Please refer to the project plans for MOT details in Appendix B, pages B167 to B182. Construction is anticipated to begin in late Summer/early Fall of 2024.

The lane restrictions will pose a temporary inconvenience to traveling motorists (including school buses and emergency services);

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however, no significant delays are anticipated, and all inconveniences and delays will cease upon project completion.

ESTIMATED PROJECT COST AND SCHEDULE: *Please note that engineering funds are included in the previous 2020-2024 STIP.

Engineering: \$ *600,000 (2020) Right-of-Way: \$ 250,000 (2023) Construction: \$ 13,247,514 (2024)

Anticipated Start Date of Construction: Late Summer/Early Fall of 2024

RIGHT OF WAY:

Land Use Impacts	Amount (acres)	
	Permanent	Temporary
Residential	0.66	0.27
Commercial	0	0
Agricultural	3.41	1.74
Forest	0	0
Wetlands	0	0
Other: School	0.03	0
Other:	0	0
TOTAL	4.10	2.01

Describe both Permanent and Temporary right-of-way and describe their current use. Typical and Maximum right-of-way widths (existing and proposed) should also be discussed. Any advance acquisition, reacquisition or easements, either known or suspected, and their impacts on the environmental analysis should be discussed.

Existing right-of-way (ROW) is considered to be the centerline of SR 32. It is anticipated that this project will require the reacquisition of 9.21 acres of apparent existing ROW consisting of the paved surface of SR 32 (from centerline to edge of pavement) and defined roadside ditches, which is currently in transportation use and used to maintain the roadway.

The project will require approximately 4.07 acres of permanent ROW from agricultural and residential land for the addition of the passing lanes and structure replacements. Additionally, 0.03 acre of permanent ROW is needed from the Western Boone Junior-Senior High School. The project also requires approximately 2.01 acres of temporary ROW from residential and agricultural land for grading activities along the passing lane locations and at all access drives.

If the scope of work or permanent or temporary right-of-way amounts change, the INDOT Environmental Services Division (ESD) and the INDOT District Environmental Section will be contacted immediately.

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Part III – Identification and Evaluation of Impacts of the Proposed Action

SECTION A - EARLY COORDINATION:

List the date(s) coordination was sent and all resource agencies that were contacted as a part of the development of this Environmental Study. Also, include the date of their response or indicate that no response was received.

Early coordination letters were sent out on June 15, 2021. A sample copy of the early coordination letter is included in Appendix C, pages C1 to C3.

Agency	Date Sent	Date Response Received	Appendix
INDOT, Crawfordsville District	June 15, 2021	No Response Received	N/A
Federal Highway Administration (FHWA)	June 15, 2021	No Response Received	N/A
Natural Resources Conservation Service (NRCS)	June 15, 2021	June 23, 2021	C13 to C14
Indiana Geological and Water Survey (IGWS)	June 15, 2021	June 15, 2021	C10 to C12
Indiana Department of Natural Resources (IDNR) Division of Fish and Wildlife	June 15, 2021	July 14, 2021	C15 to C18
Indiana Department of Environmental Management (IDEM)	June 15, 2021	June 15, 2021	C4 to C9
United States Army Corps of Engineers (USACE)	June 15, 2021	No Response Received	N/A
United States Fish and Wildlife Service (USFWS)	June 15, 2021 January 18, 2023 February 23, 2022	June 21, 2021 Official Species List Concurrence Verification Letter	C19 to C20 C22 to C37 C39 to C52
Local Floodplain Administrator	June 15, 2021	No Response Received	N/A
Indianapolis Metropolitan Planning Organization (MPO)	June 15, 2021	No Response Received	N/A
U.S. Department of Housing and Urban Development (USHUD)	June 15, 2021	No Response Received	N/A
National Park Service (NPS)	June 15, 2021	No Response Received	N/A
Boone County Surveyor	June 15, 2021	No Response Received	N/A
Boone County Highway Department	June 15, 2021	No Response Received	N/A
Boone County Soil and Water	June 15, 2021	No Response Received	N/A
Boone County Commissioners Office	June 15, 2021	No Response Received	N/A
Boone County Council	June 15, 2021	No Response Received	N/A
Boone County Area Plan Commission	June 15, 2021	No Response Received	N/A
Municipal Separate Storm Sewer System (MS4) Coordinator	June 15, 2021	No Response Received	N/A
IDNR, Oil and Gas Division	June 15, 2021	No Response Received	N/A
Pleasant View Church	June 15, 2021	No Response Received	N/A
Dover Christian Church	June 15, 2021	No Response Received	N/A
Western Boone Junior-Senior High School	June 15, 2021	No Response Received	N/A

All applicable recommendations are included in the *Environmental Commitments* section of this CE document.

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SECTION B – ECOLOGICAL RESOURCES:

Streams, Rivers, Watercourses & Other Jurisdictional Features

Federal Wild and Scenic Rivers
State Natural, Scenic or Recreational Rivers
Nationwide Rivers Inventory (NRI) listed
Outstanding Rivers List for Indiana
Navigable Waterways

Presence

X

Impacts

Yes	No
	X

Total stream(s) in project area: 3,306.22 Linear feet Total impacted stream(s): 0 Linear feet

Stream Name	Classification	Total Size in Project Area (linear feet)	Impacted linear feet	Comments (i.e. location, flow direction, likely Water of the US, appendix reference)
*Sanitary Ditch	Perennial	187.60	0	(Lat. 40.04674, Long. -86.49890), Flows south to north, Likely <i>Waters of the US</i> , Appendix B, page B186.
Deer Creek	Ephemeral	44.10	0	(Lat. 40.04672, Long. -86.51357), Flows south to north, Likely <i>Waters of the US</i> , Appendix B, page B186.
Wolf Creek	Intermittent	118.06	0	(Lat. 40.05416, Long. -86.56954), Flows south to north, Likely <i>Waters of the US</i> , Appendix B, page B185.
Little Sugar Creek	Intermittent	2,677.75	0	(Lat. 40.05417, Long. -86.58984), Flows southwest before turning east to west along SR 32 before turning northwest, Likely <i>Waters of the US</i> , Appendix B, pages B184 to B185 and B200.
*Higgins Ditch	Perennial	116.01	0	(Lat. 40.05449, Long. -86.62284) Flows south to north, Likely <i>Waters of the US</i> . Please note that Higgins Ditch is not shown on the project plans so please refer to the Waters Report in Appendix F, page F59.
*Unnamed Tributary (UNT) to Little Sugar Creek	Intermittent	162.70	0	(Lat. 40.05472, Long. -86.66828) Flows south to north, Likely <i>Waters of the US</i> , Appendix B, pages B183 and B191.

*Please note that Sanitary Ditch, Higgins Ditch, and UNT to Little Sugar Creek were within the investigation area used for the *Waters of the U.S. Report*. However, they are outside the project area and will not be impacted by this project.

Describe all streams, rivers, watercourses and other jurisdictional features adjacent or within the project area. Include whether or not impacts (both permanent and temporary) will occur to the features identified. Include if the streams or rivers are listed on any federal or state lists for Indiana. Include if features are likely subject to federal or state jurisdiction. Discuss measures to avoid, minimize, and mitigate if impacts will occur.

Based on the desktop review, the aerial maps of the project area (Appendix B, pages B5 to B53), and the RFI report (Appendix E, pages E1 to E12) there are 28 streams, rivers, watercourse or other jurisdictional features within the 0.5 mile search radius. There are three stream segments within or adjacent to the project area. That number was not confirmed, as six streams, rivers, watercourses, or other jurisdictional features were found within and adjacent to the project area during the site visits on October 7 and 8, 2020, July 6, 2021, and August 26, 2021, by RQAW.

Please note that at the direction of INDOT Site Assessment and Management (SAM), one full RFI and one limited RFI was prepared for this project. For the purpose of this section and all other applicable sections of this CE (other than the *Hazardous Materials* section) the discussions will include references to the full RFI, as the limited RFI only covers hazardous materials.

A *Waters of the U.S. Determination / Wetland Delineation Report* was approved by INDOT Ecology and Waterway Permitting Office on September 16, 2021. Please refer to Appendix F, pages F1 to F72 for the *Waters of the U.S. Determination / Wetland Delineation Report*. It was determined that six likely jurisdictional waters exist within the investigated area. The USACE makes all final determinations regarding jurisdiction. Only three likely jurisdictional streams (Deer Creek, Wolf Creek, and Little Sugar Creek) are within the project area, as the investigation area used in the approved *Waters of the U.S. Determination / Wetland Delineation*

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Report is larger than the project area limits.

Based on a desktop review by RQAW on October 6, 2020, there are no Federal, Wild and Scenic Rivers; State Natural, Scenic, and Recreational Rivers; Outstanding Rivers for Indiana; navigable waterways or National Rivers Inventory waterways present within the project area.

This project does not include work on any structures located at these waterways, and all work occurring adjacent to these waterways is limited to the roadway pavement. No work below the Ordinary High Water Mark (OHWM) to any waterway will occur as a result of this project. Please refer to the project plans in Appendix B, pages B186 (Deer Creek); B185 (Wolf Creek); and B184 to B185 and B200 (Little Sugar Creek).

Early Coordination

In their early coordination response dated July 14, 2021, the IDNR Division of Fish and Wildlife stated that HMA contains polycyclic aromatic hydrocarbons (PAH's), which are known to have negative impacts on aquatic organisms and that care should be taken to avoid migration of (PAH's) into waterways. They went on to recommended implementing erosion and sediment control measures, stream bank stabilization measures, maintaining wildlife passage through structures, minimizing in-channel disturbance, time restrictions for working within the waterway, and proper use of/placement of riprap (Appendix C, pages C15 to C18). All applicable recommendations are included in the *Environmental Commitments* section of this CE document.

In their early coordination response, dated June 21, 2021, the USFWS stated stream impacts may require permits from the USACE IDEM, and IDNR. The USFWS also recommended implementing erosion and sediment control measures, stream bank stabilization measures, facilitating wildlife movement under bridges/culverts, minimizing in-channel work, time restrictions for working within the waterway, and proper use of/placement of riprap (Appendix C, pages C19 to C20). All applicable recommendations are included in the *Environmental Commitments* section of this CE document.

Open Water Feature(s)

Reservoirs
Lakes
Farm Ponds
Retention/Detention Basin
Storm Water Management Facilities
Other: Residential Ponds

Presence

X
X

Impacts

Yes	No
	X
	X

Describe all open water feature(s) identified adjacent or within the project area. Include whether or not impacts (both permanent and temporary) will occur to the features identified. Include if features are likely subject to federal or state jurisdiction. Discuss measures to avoid, minimize, and mitigate if impacts will occur.

Based on the desktop review, the aerial maps of the project area (Appendix B, pages B5 to B53), and the RFI report (Appendix E, pages E1 to E12) there are four open water features within the 0.5 mile search radius. There are three open water features adjacent to the project area, which was confirmed during the site visits on October 7 and 8, 2020, July 6, 2021, and August 26, 2021 by RQAW. There are no open water features within the project area and all open water features are outside the construction limits for the project. Therefore, no impacts are expected.

Wetlands

Presence

X

Impacts

Yes

No

X

Total wetland area: 0.093 Acre(s) Total wetland area impacted: 0 Acre(s)

(If a determination has not been made for non-isolated/isolated wetlands, fill in the total wetland area impacted above.)

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Wetland No.	Classification	Total Size (Acres)	Impacted Acres	Comments (i.e. location, likely Water of the US, appendix reference)
Wetland A	PEM (Freshwater Emergent)	0.022	0	(Lat. 40.04682, Long. -86.51822), Likely <i>Water of the US</i> , Appendix B, page B186.
Wetland B	PEM	0.001	0	(Lat. 40.04682, Long. -86.51847), Likely <i>Water of the US</i> , Appendix B, page B186.
Wetland C	PEM	0.005	0	(Lat. 40.05429, Long. -86.58506), Likely <i>Water of the US</i> , Appendix B, page B185.
*Wetland D	PEM	0.011	0	(Lat. 40.05473, Long. -86.66690), Likely <i>Water of the US</i> , Appendix B, page B191.
*Wetland E	PEM	0.054	0	(Lat. 40.05473, Long. -86.66769), Likely <i>Water of the US</i> , Appendix B, page B191.

*Please note that Wetlands D and E were within the investigation area used for the Waters of the U.S. Report. However, they are outside the project area and will not be impacted by the project.

Documentation

ESD Approval Dates

Wetlands (Mark all that apply)

Wetland Determination
Wetland Delineation
USACE Isolated Waters Determination

X
X

September 16, 2021
September 16, 2021

Improvements that will not result in any wetland impacts are not practicable because such avoidance would result in (Mark all that apply and explain):

Substantial adverse impacts to adjacent homes, business or other improved properties;
Substantially increased project costs;
Unique engineering, traffic, maintenance, or safety problems;
Substantial adverse social, economic, or environmental impacts, or
The project not meeting the identified needs.

X

Describe all wetlands identified adjacent or within the project area. Include whether or not impacts (both permanent and temporary) will occur to the features identified. Include if features are likely subject to federal or state jurisdiction. Discuss measures to avoid, minimize, and mitigate if impacts will occur.

Based on the desktop review, the aerial maps of the project area (Appendix B, pages B5 to B53), and the RFI report (Appendix E, pages E1 to E12) there are 48 wetlands within the 0.5-mile search radius. There are three mapped wetlands within or adjacent to the project area. That number was not confirmed, as five wetlands were found within and adjacent to the project area by the site visits on October 7 and 8, 2020, July 6, 2021, and August 26, 2021, by RQAW.

A *Waters of the U.S. Determination / Wetland Delineation Report* was approved by INDOT Ecology and Waterway Permitting Office on September 16, 2021. Please refer to Appendix F, pages F1 to F72 for the *Waters of the U.S. Determination / Wetland Delineation Report*. It was determined that five likely jurisdictional wetlands exist within the investigated area. The U.S. Army Corps of Engineers (USACE) makes all final determinations regarding jurisdiction. Only three wetlands exist within the project area, as the investigation area used in the approved *Waters of the U.S. Determination / Wetland Delineation Report* was larger than the project area limits.

All work occurring adjacent to these wetlands is limited to the roadway pavement. No work within the boundaries of any delineated wetland will occur as a result of this project. Please refer to the project plans in Appendix B, pages B186 (Wetlands A and B), B185 (Wetland C), and B191 (Wetlands D and E).

Early Coordination:

In their early coordination response, dated June 21, 2021, the USFWS stated wetland impacts may require permits from the USACE and IDEM. They went on to state that wetland impacts should be avoided, and any unavoidable impacts should be compensated for in accordance with agency mitigation guidelines (Appendix C, pages C19 to C20). All applicable recommendations are included in the *Environmental Commitments* section of this CE document.

The IDNR did not provide any recommendations or comments regarding wetlands.

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Terrestrial Habitat

Presence

☒

Impacts

Yes

NO

☒

☐

Total terrestrial habitat in project area: 52 Acre(s) Total tree clearing: 0.80 Acre(s)

Describe types of terrestrial habitat (i.e. forested, grassland, farmland, lawn, etc) adjacent or within the project area. Include whether or not impacts will occur to habitat identified. Include total terrestrial habitat impacted and total tree clearing that will occur. Discuss measure to avoid, minimize, and mitigate if impacts will occur.

Based on a desktop review, multiple site visits on October 7 and 8, 2020, July 6, 2021, and August 26, 2021 by RQAW, the aerial maps of the project area (Appendix B, pages B5 to B53), there is wetland, lawn/maintained roadside grass, farmland, and riparian habitat within the project area. Total terrestrial habitat within the project area is roughly 52 acres consisting of 0.093 acre of wetlands, 30.8 acres of lawn/maintained roadside grass, 19.05 acres of farmland, and 2.06 acres of riparian habitat. Dominant vegetation within the project area consisted of smooth brome (*Bromus inermis*), yellow foxtail (*Setaria pumila*), poison ivy (*Toxicodendron radicans*), narrow leaf plantain (*Plantago lanceolata*), white clover (*Trifolium repens*), Kentucky bluegrass (*Poa pratensis*), Eastern white pine (*Pinus strobus*), and eastern red cedar (*Pinus resinosa*). Up to approximately 0.80 acre of tree clearing will occur with this project and will be removed during the inactive bat season (October 1 through March 31). Avoidance of the trees would not be practicable because the trees are within the limits where work activities are required for the installation of passing lanes and/or ditch construction. There will be no impacts to riparian habitat as a result of this project. Habitat impacted will consist of lawn/maintained roadside grass, wetland, and farmland. In addition, no unique or prime habitat was identified within the project area. Mitigation for habitat impacts is not anticipated.

Early Coordination:

In their early coordination response, dated July 14, 2021, the IDNR Division of Fish and Wildlife recommended revegetating disturbed areas, minimizing tree clearing, and tree clearing restrictions (Appendix C, pages C15 to C18). All applicable recommendations are included in the *Environmental Commitments* section of this CE document.

In their early coordination response, dated June 21, 2021, the USFWS also recommended revegetating disturbed areas and minimizing tree clearing (Appendix C, pages C19 to C20). All applicable recommendations are included in the *Environmental Commitments* section of this CE document.

Protected Species

Federally Listed Bats

Information for Planning and Consultation (IPaC) determination key completed
Section 7 informal consultation completed (IPaC cannot be completed)
Section 7 formal consultation Biological Assessment (BA) required

Yes

No

☒

☐

☐

☐

☐

☐

Determination Received for Listed Bats from USFWS: NE ☐ NLAA ☒ LAA ☐

Other Species not included in IPaC

Additional federal species found in project area (based on IPaC species list)
State species (not bird) found in project area (based upon consultation with IDNR)

Yes

No

☐

☒

☐

☒

Migratory Birds

Known usage or presence of birds (i.e. nests)
State bird species based upon coordination with IDNR

Yes

No

☐

☒

☐

☒

Discuss IDNR coordination and species identified. Describe USFWS Section 7 consultation and determination received for Indiana bat and northern long-eared bat impacts. Discuss if other federally listed species were identified. If so, include consultation that has occurred and the determination that was received. Discuss if migratory birds have been observed and any impacts.

Based on a desktop review and the RFI report (Appendix E, pages E1 to E12), completed by RQAW on December 20, 2021, the IDNR Boone County Endangered, Threatened and Rare (ETR) Species List has been checked. According to the IDNR Division of Fish and Wildlife early coordination response letter dated July 14, 2021 (Appendix C, pages C15 to C18), the Natural Heritage Program's Database has been checked and to date no plant or animal species listed as state or federally threatened, endangered, or

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rare have been reported to occur in the project vicinity. An INDOT 0.5-mile bat review occurred on March 3, 2021, and revealed that there are no documented sites within a 0.5-mile search radius of the project area.

Bats, Programmatic Informal Consultation (i.e. IPaC) – Not Likely to Adversely Affect

Project information was submitted through the USFWS's Information for Planning and Consultation (IPaC) portal, and an official species list was generated (Appendix C, page C22 to C37). The project is within range of the federally endangered Indiana bat (*Myotis sodalis*) and the federally threatened northern long-eared bat (NLEB) (*Myotis septentrionalis*). No additional species were generated in the IPaC species list other than the Indiana bat and northern long-eared bat.

The project qualifies for the *Range-wide Programmatic Informal Consultation for the Indiana bat and northern long eared bat (NLEB)*, dated May 2016 (revised February 2018), between FHWA, Federal Railroad Administration (FRA), Federal Transit Administration (FTA), and USFWS. Multiple bridge and small structure inspections occurred on October 7 and 8, 2020, July 6, 2021, and August 26, 2021, and no bats or evidence of bats were seen or heard using the structures (Appendix C, pages C55 to C66). An effect determination key was completed on February 23, 2022, and based on the responses provided, the project was found to "Not Likely to Adversely Affect" the Indiana bat and/or the NLEB (Appendix C, pages C39 to C52). INDOT reviewed and verified the effect finding on February 23, 2022, and requested USFWS's review of the finding. No response was received from USFWS within the 14-day review period; therefore, it was concluded they concur with the finding. Avoidance and Minimization Measures (AMMs) included with this project include general, tree removal, and temporary lighting AMMs. All AMMs and/or commitments are included as firm commitments in the *Environmental Commitments* section of this document.

This precludes the need for further consultation on this project as required under Section 7 of the Endangered Species Act, as amended. If new information on endangered species at the site becomes available, or if project plans are changed, USFWS will be contacted for consultation.

Geological and Mineral Resources

- Project located within the Indiana Karst Region
- Karst features identified within or adjacent to the project area
- Oil/gas or exploration/abandoned wells identified in the project area

Yes	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>

Date Karst Evaluation reviewed by INDOT EWPO (if applicable): _____

Discuss if project is located in the Indiana Karst Region and if any karst features have been identified in the project area (from RFI). Discuss response received from IGWS coordination. Discuss if any mines, oil/gas, or exploration/abandoned wells were identified and if impacts will occur. Include discussion of karst study/report was completed and results. (Karst investigation must comply with the current Protection of Karst Features during Planning and Construction guidance and coordinated and reviewed by INDOT EWPO)

Based on a desktop review, the project is located outside the designated karst region of Indiana as outlined in the July 15, 2021 Karst Protection Procedure. According to the topo maps of the project area (Appendix B, pages B2 to B4), the RFI report (Appendix E, pages E1 to E12), there are no karst features identified within or adjacent to the project area. In the early coordination response dated June 15, 2021, the Indiana Geological and Water Survey (IGWS) did not indicate that karst features exist in the project area (Appendix C, pages C10 to C12). However, the IGWS did indicate that within the project area there is a moderate liquefaction potential, 1 % chance annual flood hazard, moderate potential for encountering bedrock resources, low potential for encountering sand and gravel resources, and presence of active/abandoned petroleum exploration wells. The response from IGWS has been communicated with the designer on June 15, 2021. No impacts are expected.

The RFI report identified one petroleum well located adjacent to the south of the project area (Appendix E, page E4). An early coordination letter was sent to the IDNR Oil and Gas Division on June 15, 2021 (Appendix C, pages C1 to C3). No response was received.

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SECTION C – OTHER RESOURCES

Drinking Water Resources

Wellhead Protection Area(s)
Source Water Protection Area(s)
Water Well(s)
Urbanized Area Boundary
Public Water System(s)

Presence

X
X
X

Impacts

Yes	No
	X
	X
	X

Is the project located in the St. Joseph Sole Source Aquifer (SSA):

If Yes, is the FHWA/EPA SSA MOU Applicable?

If Yes, is a Groundwater Assessment Required?

Yes	No
	X

Check the appropriate boxes and discuss each topic below. Provide details about impacts and summarize resource-specific coordination responses and any mitigation commitments. Reference responses in the Appendix.

Sole Source Aquifer

The project is located in Boone County, which is not located within the area of the St. Joseph Sole Source Aquifer, the only legally designated sole source aquifer in the state of Indiana. Therefore, the FHWA/Environmental Protection Agency (EPA) Sole Source Aquifer Memorandum of Understanding (MOU) is not applicable to this project, a detailed groundwater assessment is not needed, and no impacts are expected.

Wellhead Protection Area and Source Water Area

The Indiana Department of Environmental Management's Wellhead Proximity Determinator website (<http://www.in.gov/idem/cleanwater/pages/wellhead/>) was accessed on October 20, 2022, by RQAW. This project is not located within a Wellhead Protection Area or Source Water Area. No impacts are expected.

Water Wells

The Indiana Department of Natural Resources Water Well Record Database website (<https://www.in.gov/dnr/water/3595.htm>) was accessed on October 20, 2022, by RQAW. There are four estimated well locations mapped within the right-of-way. Please note that the estimated well locations are based on address and are not expected to be within INDOT right-of-way. Should it be determined during the right-of-way phase that these wells will be affected, a cost to cure will likely be included in the appraisal to restore the wells.

Urban Area Boundary

Based on a desktop review of INDOT's MS4 website (<https://entapps.indot.in.gov/MS4/>) by RQAW on October 20, 2022, the eastern most portion of this project is located within an Urban Area Boundary (UAB). An early coordination letter was sent on June 15, 2021, to the MS4 coordinator for the City of Lebanon. The MS4 coordinator did not respond within the 30-day time frame.

Public Water System

Based on a desktop review, multiple site visits on October 7 and 8, 2020, July 6, 2021, and August 26, 2021 by RQAW, the aerial maps of the project area (Appendix B, pages B5 to B53), and IDEM's Public Water Systems Search website (<https://myweb.in.gov/IDEM/DWWW/>), this project is located where there are public water systems. Public water systems identified within or adjacent to the project area belong to the Dover Christian Church, Pleasant View Church, Western Boone Schools, and Lebanon Utilities. The Dover Christian Church, Pleasant View Church, and the Western Boone Schools supply public drinking water via water wells and will not be impacted by this project based on a review of IDNR's Water Well Record Database website. Lebanon Utilities has a water main within the project area along the south side of SR 32 from the east end of the project area (Sanitary Ditch) to Enterprise Drive. As this area is in a portion of the project area that will receive and HMA overlay, no impacts are expected.

Early Coordination

Early coordination letters were sent to the Dover Christian Church, Pleasant View Church, and the Western Boone Junior-Senior High School on June 15, 2021. No responses were received.

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Floodplains

Project located within a regulated floodplain
 Longitudinal encroachment
 Transverse encroachment
 Homes located in floodplain within 1000' up/downstream from project

Presence

X
X

Impacts

Yes	No
	X
	X

If applicable, indicate the Floodplain Level?

Level 1 ☐ Level 2 ☐ Level 3 ☒ Level 4 ☐ Level 5 ☐

Use the IDNR Floodway Information Portal to help determine potential impacts. Include floodplain map in appendix. Discuss impacts according to the classification system. If encroachment on a flood plain will occur, coordinate with the Local Flood Plain Administrator during design to insure consistency with the local flood plain planning.

Based on a desktop review of The Indiana Department of Natural Resources Indiana Floodway Information Portal website ([Indiana Floodplain Information Portal 2.0 \(arcgis.com\)](https://www.in.gov/dnr/floodway/)) by RQAW on October 20, 2022 and the RFI report, this project is located in a regulatory floodplain as determined from approved IDNR floodplain maps (Appendix F, pages F74 to F76). An early coordination letter was sent on June 15, 2021, to the local Floodplain Administrator. The Floodplain Administrator did not respond within the 30-day time frame.

This project qualifies as a Category 3 per the current INDOT CE Manual, which states: the modifications to drainage structures included in this project will result in an insubstantial change in their capacity to carry flood water. This change could cause a minimal increase in flood heights and flood limits. These minimal increases will not result in any substantial adverse impacts on the natural and beneficial floodplain values; they will not result in substantial change in flood risks or damage; and they do not have substantial potential for interruption or termination of emergency service or emergency routes; therefore, it has been determined that this encroachment is not substantial.

Farmland

Agricultural Lands
 Prime Farmland (per NRCS)

Presence

X
X

Impacts

Yes	No
X	
X	

Total Points (from Section VII of CPA-106/AD-1006*)

145

*If 160 or greater, see CE Manual for guidance.

Discuss existing farmland resources in the project area, impacts that will occur to farmland, and mitigation and minimization measures considered.

Based on a desktop review, multiple site visits on October 7 and 8, 2020, July 6, 2021, and August 26, 2021, by RQAW, the aerial maps of the project area (Appendix B, pages B5 to B53), this project will convert 3.41 acres of farmland as defined by the Farmland Protection Policy Act. An early coordination letter was sent on June 15, 2021, to the NRCS. Coordination with NRCS resulted in a score of 145 on the NRCS AD-1006 Form (Appendix C, pages C13 to C14). NRCS's threshold score for significant impacts to farmland that result in the consideration of alternatives is 160. Since this project score is less than the threshold, no significant loss of prime, unique, statewide, or local important farmland will result from this project. No alternatives other than those previously discussed in this document will be investigated without reevaluating impacts to prime farmland.

Please note the NRCS AD-1006 form states 4.78 acres of farmland will be converted; however, with the removal of the far east passing lane that number was reduced to 3.41 acres. Since the amount of farmland to be converted was reduced, additional coordination with the NRCS was not initiated.

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SECTION D – CULTURAL RESOURCES

	Category(ies) and Type(s)	INDOT Approval Date(s)	N/A
Minor Projects PA	A-4, B-3, & B-9	October 18, 2021 (Updated on June 9, 2022 and December 16, 2022)	

Full 106 Effect Finding

No Historic Properties Affected ☐ No Adverse Effect ☐ Adverse Effect ☐

Eligible and/or Listed Resources Present

NRHP Building/Site/District(s) ☐ Archaeology ☐ NRHP Bridge(s) ☐

Documentation Prepared (mark all that apply)	ESD Approval Date(s)	SHPO Approval Date(s)
APE, Eligibility and Effect Determination		
800.11 Documentation		
Historic Properties Report or Short Report		
Archaeological Records Check and Assessment		
Archaeological Phase Ia Survey Report	X	N/A
Archaeological Phase Ic Survey Report		
Other:		

MOA Signature Dates (List all signatories)

Memorandum of Agreement (MOA) ☐

If the project falls under the MPPA, describe the category(ies) that the project falls under and any approval dates. If the project requires full Section 106, use the headings provided. The completion of the Section 106 process requires that a Legal Notice be published in local newspapers. Please indicate the publication date, name of the paper(s) and the comment period deadline. Include any further Section 106 work which must be completed at a later date, such as mitigation from a MOA or avoidance commitments.

On October 18, 2021 (updated on June 9, 2022 and December 16, 2022) INDOT CRO determined that this project falls within the guidelines of Category A, Type 4 and Category B, Types 3 and 9 under the Minor Projects Programmatic Agreement (Appendix D, pages D1 to D8).

Category A, Type 4: Roadway work associated with surface replacement, reconstruction, rehabilitation, or resurfacing projects, including overlays, shoulder treatments, pavement repair, seal coating, pavement grinding, and pavement marking within previously disturbed soils where replacement, repair, or installation of curbs, curb ramps or sidewalks will not be required.

Category B, Type 3: Construction of added travel, turning, or auxiliary lanes (e.g., bicycle, truck climbing, acceleration and deceleration lanes) and shoulder widening.

Category B, Type 9: Installation, replacement, repair, lining, or extension of culverts and other drainage structures.

Please refer to Appendix D, pages D3 to D5 to see how the above listed Category B types meet both Condition A, which pertains to Archaeological Resources, and Condition B, which pertains to Above-Ground Resources.

Phase1a Archaeological Report

An archaeological record check and Phase 1a field reconnaissance (Travis 2021) was conducted by Cultural Resource Analysts, Inc. (CRA) personnel who meet the Secretary of Interior's Professional Qualification Standards as per 36 CFR Part 61 (Appendix D, pages D9 to D11). The records check did not identify any previous archeological sites within the survey area. The archaeological survey found 9 unrecorded sites, but they did not demonstrate the ability to provide important information to the history or prehistory

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of the area; therefore, no further archaeological work is recommended at the sites within the survey area. The report has been reviewed by INDOT CRO personnel who meet the Secretary of Interior's Professional Qualification Standards as per 36 CFR Part 61. INDOT CRO staff deemed the report to be acceptable and concurred with the evaluations and recommendations made in it. Therefore, there are no archaeological concerns with this project as long as the project scope does not change.

Additionally, an addendum Phase 1a survey (Indiana Archaeological Short Report; Travis 2022) conducted by CRA personnel who meet the Secretary of Interior's Professional Qualification Standards as per 36 CFR Part 61 was completed to cover additional areas of right-of-way (specifically at intersections within passing lane locations). No archaeological sites were recorded as a result of the survey, and no additional investigation is recommended. (Appendix D, page D12 to D13)

Please note that although the Dover Cemetery and Pleasant View Cemetery are within 100 feet of the project, both cemeteries are within the HMA overlay portion of the project. A Cemetery Development Plan will not be needed because both cemetery boundaries are clearly defined at the existing right-of-way and the project will not require any right-of-way from either cemetery. Additionally, any work outside the existing pavement will occur in previously disturbed soils and there is no need to purchase ROW from either cemetery, therefore; no impact is expected. Please refer to the project plans in Appendix B, pages B185 and B196 that show the construction limit boundaries for each cemetery.

Please also note that RQAW provided markups to the approved MPPA form and notified INDOT CRO on March 29, 2023, that the far east passing lane has been removed from the scope of work and that area will now just consist of an HMA overlay. As this is a reduction in the scope of work, this information was provided to INDOT CRO for their records and for consistency purposes. Please refer to Appendix D, page D14 for email correspondence and Appendix D, pages D1 to D8 for the revised MPPA form.

No further consultation is required. This completes the Section 106 process and the responsibilities of the FHWA under Section 106 have been fulfilled.

SECTION E – SECTION 4(f) RESOURCES/ SECTION 6(f) RESOURCES

	<u>Presence</u>	<u>Use</u>	
		Yes	No
Parks and Other Recreational Land			
Publicly owned park	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Publicly owned recreation area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (school, state/national forest, bikeway, etc.)	X	<input type="checkbox"/>	X
Wildlife and Waterfowl Refuges			
National Wildlife Refuge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
National Natural Landmark	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
State Wildlife Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
State Nature Preserve	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Historic Properties			
Site eligible and/or listed on the NRHP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>Evaluations</u>			
<u>Prepared</u>			
Programmatic Section 4(f)	<input type="checkbox"/>		
"De minimis" Impact	<input type="checkbox"/>		
Individual Section 4(f)	<input type="checkbox"/>		
Any exception included in 23 CFR 774.13	<input type="checkbox"/>		

Discuss Programmatic Section 4(f) and "de minimis" Section 4(f) impacts in the discussion below. Individual Section 4(f) documentation must be included in the appendix and summarized below. Discuss proposed alternatives that satisfy the requirements of Section 4(f). FHWA has identified various exceptions to the requirement for Section 4(f) approval. Refer to 23 CFR § 774.13 - Exceptions.

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Section 4(f) of the U.S. Department of Transportation Act of 1966 prohibits the use of certain public and historic lands for federally funded transportation facilities unless there is no feasible and prudent alternative. The law applies to significant publicly owned parks, recreation areas, wildlife/waterfowl refuges, and National Register of Historic Places (NRHP) eligible or listed historic properties regardless of ownership. Lands subject to this law are considered Section 4(f) resources.

Based on a desktop review, the aerial maps of the project area (Appendix B, pages B5 to B53), and the RFI report (Appendix E, pages E1 to E12), there are three potential Section 4(f) resources located within the 0.5 mile search radius. According to additional research and by the site visits on October 7 and 8, 2020, July 6, 2021, and August 26, 2021, by RQAW, there is one potential Section 4(f) resource located adjacent to the project area. The Western Boone Junior-Senior High School is located adjacent to the north of SR 32. The school itself does not qualify as a Section 4(f) resource, but the recreational facilities on this property (such as ball fields, and tennis court) may be considered a Section 4(f) resource if open to the public. An early coordination letter was sent to the Western Boone Junior-Senior High School on June 15, 2021, but no response was received. The tennis court associated with the school is the nearest potential Section 4(f) resource and is over 600 feet away from the project area. The project will not use this resource by taking permanent right-of-way and will not indirectly use the resource in such a way that the protected activities, features, or attributes that qualify a resource for protection under Section 4(f) are substantially impaired. Therefore, no Section 4(f) use is expected.

Section 6(f) Involvement

Presence

Use

Yes

No

Section 6(f) Property

☐
☐
☐

Discuss Section 6(f) resources present or not present. Discuss if any conversion would occur as a result of this project. If conversion will occur, discuss the conversion approval.

The U.S. Land and Water Conservation Fund Act of 1965 established the Land and Water Conservation Fund (LWCF), which was created to preserve, develop, and assure accessibility to outdoor recreation resources. Section 6(f) of this Act prohibits conversion of lands purchased with LWCF monies to a non-recreation use.

A review of Section 6(f) properties on the INDOT ESD website revealed a total of five properties in Boone County (Appendix I, page I1). None of these properties are located within or adjacent to the project area. Therefore, there will be no impacts to Section 6(f) resources.

SECTION F – Air Quality

STIP/TIP and Conformity Status of the Project

Is the project in the most current STIP/TIP?

Is the project located in an MPO Area?

Is the project in an air quality non-attainment or maintenance area?

If Yes, then:

Is the project in the most current MPO TIP?

Is the project exempt from conformity?

If No, then:

Is the project in the Transportation Plan (TP)?

Is a hot spot analysis required (CO/PM)?

Yes

No

X

X
X

Location in STIP:

Name of MPO (if applicable):

Location in TIP (if applicable):

Initial FY 2022-2026 STIP (Appendix C - INDOT Rural and Local: Page 15)

N/A

N/A

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Level of MSAT Analysis required?

Level 1a ☒ Level 1b ☐ Level 2 ☐ Level 3 ☐ Level 4 ☐ Level 5 ☐

Describe if the project is listed in the STIP and if it is in a TIP. Describe the attainment status of the county(ies) where the project is located. Indicate whether the project is exempt from a conformity determination. If the project is not exempt, include information about the TP and TIP. Describe if a hot spot analysis is required and the MSAT Level.

STIP

The Fiscal Year (FY) 2022-2026 Statewide Transportation Improvement Program (STIP) is listed based on the lead DES number in the contract. The lead DES number for this contract is 1800060. The FY 2022-2026 STIP includes DES numbers 1900361, 2101655, 2201194, 2201193, 2201192, 2201191, 2201190, 2201189, 2201188, and 2201187 by reference with the contract number R-42253 (Appendix H, page H1).

Attainment Status

This project is located in Boone County, which is currently in attainment for all criteria pollutants according to the EPA Green Book website at: <https://www.epa.gov/green-book>. Therefore, the conformity procedures of 40 CFR Part 93 do not apply.

Mobile Source Air Toxics (MSAT)

This project is of a type qualifying as a categorical exclusion (Group 1) under 23 CFR 771.117(c), or exempt under the Clean Air Act conformity rule under 40 CFR 93.126, and as such, a Mobile Source Air Toxics analysis is not required.

SECTION G - NOISE

Noise

Yes

No

Is a noise analysis required in accordance with FHWA regulations and INDOT's traffic noise policy? ☐ ☒

Date Noise Analysis was approved/technically sufficient by INDOT ESD: _____

Describe if the project is a Type I or Type III project. If it is a Type I project, describe the studies completed to date and if noise impacts were identified. If noise impacts were identified, describe if abatement is feasible and reasonable and include a statement of likelihood.

This project is a Type III project. In accordance with 23 CFR 772 and the current Indiana Department of Transportation Traffic Noise Analysis Procedure, this action does not require a formal noise analysis.

SECTION H – COMMUNITY IMPACTS

Regional, Community & Neighborhood Factors

Will the proposed action comply with the local/regional development patterns for the area?

Yes

☒

No

☐

Will the proposed action result in substantial impacts to community cohesion?

☐

☒

Will the proposed action result in substantial impacts to local tax base or property values?

☐

☒

Will construction activities impact community events (festivals, fairs, etc.)?

☐

☒

Does the community have an approved transition plan?

☒

☐

If No, are steps being made to advance the community's transition plan?

☐

☐

Does the project comply with the transition plan? (explain in the discussion below)

☐

N/A

Discuss how the project complies with the area's local/regional development patterns; whether the project will impact community cohesion; and impact community events. Discuss how the project conforms with the ADA Transition Plan.

This project seeks to maintain the LOS C for the year 2044. In addition, this project seeks to restore the ride-ability of the pavement and improve access control and eliminate conflicts for motorists accessing SR 32 from SR 75. As such, this project is not anticipated to impact the tax base for the area or result in division of the community. There are no long-term, foreseeable economic impacts from the project.

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The Fairs and Festivals website (Find Art Shows, Craft Shows, and Festivals near you (<https://www.fairsandfestivals.net/>), accessed on January 23, 2023, by RQAW. There are currently no fairs or festivals scheduled within a 10-mile radius of zip codes 46071 and 46052 (project area) in late Summer or early Fall of 2024 when construction is anticipated to begin. Any future fairs / festivals that may be planned, are unlikely to be impacted by the project since vehicles will still be able to utilize SR 32 during construction.

Boone County has an approved ADA transition plan: "Title VI Nondiscrimination Implementation Plan and Policy" dated September 2017, and can be found at: [Boone County ADA Transition Plan](#). However, no ADA facilities are currently located within project area, nor are any ADA facilities proposed to be installed as part of this project. Therefore, this ADA transition plan is not applicable to this project.

Public Facilities and Services

Discuss what public facilities and services are present in the project area and impacts (such as MOT) that will occur to them. Include how the impacts have been minimized and what coordination has occurred. Some examples of public facilities and services include health facilities, educational facilities, public and private utilities, emergency services, religious institutions, airports, transportation or public pedestrian and bicycle facilities.

Based on a desktop review, the aerial maps of the project area (Appendix B, pages B5 to B53), and the RFI report (Appendix E, pages E1 to E12) there are five public facilities within the 0.5 mile search radius. That number was not confirmed, as three public facilities were identified during the site visits on October 7 and 8, 2020, July 6, 2021, and August 26, 2021, by RQAW. The Pleasant View Church, Dover Christian Church, and the Western Boone Junior-Senior High School are within or adjacent to the project area. There will be no impacts to the Pleasant View Church or Dover Christian Church as no right-of-way is anticipated to be acquired from either property. Impacts to the Western Boone Junior-Senior High School will consist of permanent right-of-way acquisition for the replacement of Structure No. 120 as shown in the project plans in Appendix B, page B196. However, this right-of-way acquisition will not alter or change access to the property. Access to all properties will be maintained during construction.

In addition, both private and public utilities are known to exist within or adjacent to the project area. These include: Advance Municipal Utilities, Atlantic Fiber Networks (AFN)-WYYERD (Boone/Formerly Atlantic Engineering), AT&T, Boone County Rural Electric Membership Cooperative (REMC), Comcast Cable, Enterprise Products Operating LLC, Frontier, Lebanon Utilities, Metronet Fibernet LLC, Vectren, and Windstream. It is anticipated that there will be utility impacts due to the scope of the project. Any utility relocations required are anticipated to occur within proposed right-of-way. If any utility relocations result in any additional environmental impacts that are not assessed in this environmental document, an Additional Information (AI) document will need to be prepared. A firm commitment to this effect has been added to the *Environmental Commitments* section of this CE document.

Early Coordination

Early coordination letters were sent to the Dover Christian Church, Pleasant View Church, and the Western Boone Junior-Senior High School on June 15, 2021. No responses were received.

It is the responsibility of the project sponsor to notify school corporations and emergency services at least two weeks prior to any construction that would block or limit access.

Environmental Justice (EJ) (Presidential EO 12898)

During the development of the project were EJ issues identified?

Does the project require an EJ analysis?

If YES, then:

Are any EJ populations located within the project area?

Will the project result in adversely high and disproportionate impacts to EJ populations?

Yes	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>

Indicate if EJ issues were identified during project development. If an EJ analysis was not required, discuss why. If an EJ analysis was required, describe how the EJ population was identified. Include if the project has a disproportionately high or adverse effect on EJ populations and explain your reasoning. If yes, describe actions to avoid, minimize and mitigate these effects.

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Under FHWA Order 6640.23A, FHWA and the project sponsor, as a recipient of funding from FHWA, are responsible to ensure that their programs, policies, and activities do not have a disproportionately high and adverse effect on minority or low-income populations. Per the current INDOT Categorical Exclusion Manual, an Environmental Justice (EJ) Analysis is required for any project that has two or more relocations or 0.5 acre of additional permanent right-of-way. This project proposes a HMA minor structural overlay and the addition of three passing lanes, two eastbound (EB) and one westbound (WB) that will each be approximately one mile long. The HMA overlay portion of the project (Des No. 1900361) will be located on SR 32 from 0.05 mile west of SR 75 to 0.5 mile west of I-65. The added passing lanes portion of this project (Des No. 1800060) will be located on SR 32 from 3.69 miles west of SR 75 to 1.41 miles east of SR 75. The project will require 4.10 acres of permanent right-of-way, and no relocations. Therefore, an EJ Analysis is required.

Potential EJ impacts are detected by locating minority and low-income populations relative to a reference population to determine if populations of EJ concern exists and whether there could be disproportionately high and adverse impacts to them. The reference population may be a county, city or town and is called the community of comparison (COC). In this project, the COC is Boone County, Indiana. The community that overlaps the project area is called the affected community (AC). In this project, there are two ACs and they are Census Tracts 8102 & 8103. An AC has a population of concern for EJ if the population is more than 50% minority or low-income or if the low-income or minority population is 125% of the COC. Data from the American Community Survey (ACS) 5-year estimates (2015-2019) was obtained from the U.S. Census Bureau's webpage at: <https://data.census.gov/cedsci/> on June 15, 2021, by RQAW. The data collected for minority and low-income populations within the AC's are summarized in the below table.

Table: Minority and Low-Income Data (ACS 5-Year Estimates 2015-2019)			
	COC-Boone County Indiana	AC-1 Census Tract 8102 Boone County, Indiana	AC-2 Census Tract 8103 Boone County, Indiana
Percent Minority	9.4%	1.3%	5.2%
125% of COC	11.7%	AC < 125% COC	AC < 125% COC
EJ Population of Concern		No	No
Percent Low-Income	6%	5.4%	8.6%
125% of COC	7.4%	AC < 125% COC	AC > 125% COC
EJ Population of Concern		No	Yes

AC-1, Census Tract 8102 has a percent minority of 1.3% which is below 50% and is below the 125% COC threshold. AC-2, Census Tract 8103 has a percent minority of 5.2% which is below 50% and is below the 125% COC threshold. Therefore, both ACs do not contain minority populations of EJ concern.

AC-1, Census Tract 8102 has a percent low income of 5.4% which is below 50% and is below the 125% COC threshold. AC-2, Census Tract 8103 has a percent low income of 8.6% which is below 50% and is above the 125% COC threshold. Therefore, AC-2 is a low-income population of EJ concern.

Overall, the negative impacts to property owners will be minimal and consist primarily of short-term construction impacts and the loss of strip right-of-way. The permanent right-of-way will consist primarily of agricultural land and will not substantially diminish the existing use of the affected property owners. There will be no impacts to community cohesion and this project will not directly or indirectly create a physical barrier that would divide the community. Two-way traffic will be maintained at all times during construction and access to all properties will be maintained throughout the duration of the project.

Impacts from the project will be distributed evenly amongst the EJ population and non-EJ populations as the permanent right-of-way to be acquired will consist of strip right-of-way. It is not expected that this project will have a disproportionately high and adverse environmental impact to populations of EJ concern when compared to non-EJ populations.

INDOT, Environmental Services Division stated on March 28, 2022, that they would not consider the impacts associated with this project as causing a disproportionately high and adverse effect on minority and/or low-income populations of EJ concern relative to non-EJ populations in accordance with the provisions of Executive Order 12898 and FHWA Order 6640.23a. (Appendix I, pages I2 to I7). Therefore, no further EJ Analysis is required.

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Relocation of People, Businesses or Farms

Will the proposed action result in the relocation of people, businesses or farms?
Is a BIS or CSRS required?

Yes	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>

Number of relocations: Residences: 0 Businesses: 0 Farms: 0 Other: 0

Discuss any relocations that will occur due to the project. If a BIS or CSRS is required, discuss the results in the discussion below.

No relocations of people, businesses, or farms will take place as a result of this project.

SECTION I – HAZARDOUS MATERIALS & REGULATED SUBSTANCES

Hazardous Materials & Regulated Substances (Mark all that apply)

Red Flag Investigation (RFI)
Phase I Environmental Site Assessment (Phase I ESA)
Phase II Environmental Site Assessment (Phase II ESA)
Design/Specifications for Remediation required?

Documentation

<input checked="" type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

Date RFI concurrence by INDOT SAM (if applicable): December 21, 2021

Include a summary of the potential hazardous material concerns found during review. Discuss in depth sites found within, directly adjacent to, or ones that could impact the project area. Refer to current INDOT SAM guidance. If additional documentation (special provisions, pay quantities, etc.) will be needed, include in discussion. Include applicable commitments.

Based on a review of geographic information system (GIS) and available public records, a full RFI was concurred by INDOT SAM on December 21, 2021 (Appendix E, pages E1 to E12) and a limited RFI was concurred by INDOT SAM on December 21, 2021 (Appendix E, pages E13 to E19). Please note that at the direction of INDOT Site Assessment and Management (SAM), one full RFI and one limited RFI was prepared for this project. The limited RFI only covers hazardous materials within the HMA overlay portion of the project. There are two state cleanup sites, six underground storage tanks (USTs), one voluntary remediation site, five leaking underground storage tanks (LUSTs), one institutional controls site, eight National Pollutant Discharge Elimination System (NPDES) facilities, and one NPDES pipe location located within 0.5 mile of the project area. There is one UST site, one NPDES facility, and one NPDES pipe that could affect the project area.

UST Site

Dover Marathon, 7995 SR 32 West (AI ID 1951), is incorrectly mapped within the project area, approximately 1.6 mile east of the SR 32 and SR 75 intersection. The site is actually located adjacent to the project area, in the southwest quadrant of the SR 32 and SR 75 intersection. The gas station was closed, and four (4) USTs were removed in the early 1990's. There is no closure documentation available. Based on the proposed depth of excavation (i.e. 1-foot below ground surface (bgs)), no impact is expected; however, if the depth of excavation should change, coordination with INDOT SAM will occur. Coordination occurred with INDOT SAM on March 7, 2022, regarding excavation at this site increasing to 2-feet bgs for the addition of a curbed island (Des. No. 2101655). INDOT SAM responded on March 8, 2022, stating that the update from 1-foot bgs to 2-feet bgs should not be an issue or require additional investigation; therefore, an RFI addendum is not needed (Appendix E, pages E20 to E21.)

NPDES Facility

Western Boone Junior-Senior High School Track and Renovations, 1205 SR 75 (AI ID 123849), is located adjacent to the north of the Eastbound Passing Lane 2 project area. The permit is in effect until April 8, 2024. Coordination with Western Boone Junior-Senior High School will occur.

NPDES Pipe Locations

This pipe location, associated with the Western Boone Junior-Senior High School, is located approximately 0.30 mile north of the Eastbound Passing Lane 2 project area. Coordination with Western Boone Junior-Senior High School will occur.

An early coordination letter was sent to the Western Boone Junior-Senior High School on June 15, 2021, but no response was

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received. Additional coordination will need to occur with the Western Boone Junior-Senior High School about the above NPDES facility and NPDES pipe location located on their property. These have been added as a firm commitment in the below *Environmental Commitments* section of this document.

Coordination occurred with INDOT SAM on December 20, 2022, to determine if an RFI addendum would need to be prepared due to the age of RFI reports being one year old, the addition of drive pipes, and the removal of ditch regrading throughout the entire project area. INDOT SAM responded on December 21, 2022, stating that no RFI addendum is needed (Appendix E, pages E22 to E23).

Part IV – Permits and Commitments

PERMITS CHECKLIST

Permits (mark all that apply)

Likely Required

Army Corps of Engineers (404/Section10 Permit)

Nationwide Permit (NWP)

Regional General Permit (RGP)

Individual Permit (IP)

Other

IN Department of Environmental Management (401/Rule 5)

Nationwide Permit (NWP)

Regional General Permit (RGP)

Individual Permit (IP)

Isolated Wetlands

Rule 5

Other

IN Department of Natural Resources

Construction in a Floodway

Navigable Waterway Permit

Other

Mitigation Required

US Coast Guard Section 9 Bridge Permit

Others (Please discuss in the discussion below)

X

List the permits likely required for the project and summarize why the permits are needed, including permits designated as "Other."

This project will require an IDEM Construction Stormwater General Permit (formally known as Rule 5) as soil disturbance will exceed one acre.

Applicable recommendations provided by resource agencies are included in the *Environmental Commitments* section of this document. If permits are found to be necessary, the conditions of the permit will be requirements of the project and will supersede these recommendations.

It is the responsibility of the project sponsor to identify and obtain all required permits.

ENVIRONMENTAL COMMITMENTS

List all commitments and include the name of agency/organization requesting/requiring the commitment(s). Listed commitments should be numbered.

Firm:

1. If the scope of work or permanent or temporary right-of-way amounts change, the INDOT Environmental Services Division

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- (ESD) and the INDOT District Environmental Section will be contacted immediately. (INDOT ESD and INDOT Crawfordsville District)
2. It is the responsibility of the project sponsor to notify school corporations and emergency services at least two weeks prior to any construction that would block or limit access. (INDOT ESD)
 3. If any utility relocations result in any additional environmental impacts that are not assessed in this environmental document, an Additional Information (AI) document will need to be prepared. (INDOT, Crawfordsville District)
 4. Any work in a wetland area within right-of-way or in borrow/waste areas is prohibited unless specifically allowed in the U.S. Army Corps of Engineers permit. (INDOT ESD)
 5. The locations of Wetlands A through E will be shown on the final design plan sheets and call-out boxes stating "Do Not Disturb" for Wetlands A through E will be added to the final design plan sheets. A protected resource fence shall be provided around the boundaries of Wetlands A through C as they are adjacent to all construction activities, to provide clear delineation for the contractor. (INDOT ESD)
 6. NPDES Facility: Western Boone Junior-Senior High School Track and Renovations, 1205 SR 75 (AI ID 123849), is located adjacent to the north of the Eastbound Passing Lane 2 project area. The permit is in effect until April 8, 2024. The designer will be responsible for coordinating with Western Boone Junior-Senior High School. (INDOT SAM)
 7. NPDES Pipe Locations: This pipe location, associated with the Western Boone Junior-Senior High School, is located approximately 0.30 mile north of the Eastbound Passing Lane 2 project area. The designer will be responsible for coordinating with Western Boone Junior-Senior High (INDOT SAM)
 8. UST Site: Dover Marathon, 7995 SR 32 West (AI ID 1951), is located adjacent to the project area in the southwest quadrant of the SR 32 and SR 75 intersection. The gas station was closed, and four (4) USTs were removed in the early 1990's. There is no closure documentation available. Based on the proposed depth of excavation (i.e. 2 feet-bgs), no impact is expected; however, if the depth of excavation should change, coordination with INDOT SAM will occur. (INDOT SAM)
 9. Lighting AMM 1: Direct temporary lighting away from suitable habitat during the active season. (USFWS)
 10. General AMM 1: Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs. (USFWS)
 11. Tree Removal AMM 1: Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal. (USFWS)
 12. Tree Removal AMM 2: Apply time of year restrictions for tree removal when bats are not likely to be present, or limit tree removal to 10 or fewer trees per project at any time of year within 100 feet of existing road/rail surface and outside of documented roosting/foraging habitat or travel corridors; visual emergence survey must be conducted with no bats observed. (USFWS)
 13. Tree Removal AMM 3: Ensure tree removal is limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits). (USFWS)
 14. Tree Removal AMM 4: Do not remove documented Indiana bat or NLEB roosts that are still suitable for roosting, or trees within 0.25 miles of roosts, or documented foraging habitat any time of year. (USFWS)

For Further Consideration:

1. Restrict below low-water work in streams to placement of culverts, piers, pilings and/or footings, shaping of the spill slopes around the bridge abutments, and placement of riprap. (USFWS)
2. Culverts should span the active stream channel, should be either embedded or a 3-sided or open-arch culvert, and be installed where practicable on an essentially flat slope. When an open-bottom culvert or arch is used in a stream, which has a good natural bottom substrate, such as gravel, cobbles and boulders, the existing substrate should be left undisturbed beneath the culvert to provide natural habitat for the aquatic community. (USFWS)
3. Minimize the extent of hard armor (riprap) in bank stabilization by using bioengineering techniques whenever possible. If riprap is utilized for bank stabilization, extend it below low-water elevation to provide aquatic habitat. (USFWS)
4. Avoid all work within the inundated part of the stream channel (in perennial streams and larger intermittent streams) during the fish spawning season (April 1 through June 30), except for work within sealed structures such as caissons or cofferdams that were installed prior to the spawning season. No equipment shall be operated below Ordinary High-Water Mark during this time unless the machinery is within the caissons or on the cofferdams. (USFWS)
5. Evaluate wildlife crossings under bridge/culverts projects in appropriate situations. Suitable crossings include flat areas below bridge abutments with suitable ground cover, high water shelves in culverts, amphibian tunnels and diversion fencing. (USFWS)
6. Do not cut any trees suitable for Indiana bat or Northern Long-eared bat roosting from April 1 through September 30. (IDNR Division of Fish and Wildlife)
7. Do not construct any temporary runarounds, access bridges, causeways, cofferdams, diversions, or pumparounds. (IDNR Division of Fish and Wildlife)

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8. Use minimum average 6 inch graded riprap stone extended below the normal water level to provide habitat for aquatic organisms in the voids. (IDNR Division of Fish and Wildlife)
9. Hot Mixed Asphalt (HMA) contains polycyclic aromatic hydrocarbons (PAHs) which are known to have negative impacts on aquatic organisms. Care should be taken to avoid migration of PAHs into waterways to the greatest extent possible. (IDNR Division of Fish and Wildlife)
10. The Division of Fish & Wildlife recommends considering a more sustainable approach to stormwater management. The traditional model of stormwater management aims to drain runoff as quickly as possible with the help of channels and pipes, which increases peak flows and costs of stormwater management. This type of solution only transfers flood problems from one section of a basin to another section. A more sustainable approach should aim to rebuild the natural water cycle by using storage techniques such as (retention basins, constructed wetlands, raingardens, etc.) and recharging groundwater using infiltration techniques such as (infiltration basins or trenches, pervious pavement, etc.). (IDNR Division of Fish and Wildlife)
11. Contaminated road runoff can significantly impact the aquatic environment through increased turbidity and release of sediment into the stream, which can be harmful to fish and other aquatic organisms, their eggs, and their food supply. Where possible, road runoff should be directed to riprap turnouts and sediment filtration prior to entering a stream to reduce impacts to aquatic species. (IDNR Division of Fish and Wildlife)
12. The new, replacement, or rehabbed structure, and any bank stabilization under the structure, should not create conditions that are less favorable for wildlife passage under the structure compared to the current conditions. (IDNR Division of Fish and Wildlife)
13. Impacts to non-wetland forest of one (1) acre or more should be mitigated at a minimum 2:1 ratio. If less than one acre of non-wetland forest is removed in a rural setting, replacement should be at a 1:1 ratio based on area. Impacts to nonwetland forest under one (1) acre in an urban setting should be mitigated by planting five trees, at least 2 inches in diameter-at-breast height (dbh), for each tree which is removed that is 10 inches dbh or greater (5:1 mitigation based on the number of large trees) or by using the 1:1 replacement ratio based on area depending on the type of habitat impacted (individual canopy tree removal in an urban streetscape or park-like environment versus removal of habitat supporting a tree canopy, woody understory, and herbaceous layer). Impacts under 0.10 acre in an urban area may still involve the replacement of large diameter trees but typically do not require any additional mitigation or additional plantings beyond seeding and stabilizing disturbed areas. (IDNR Division of Fish and Wildlife)
14. Riprap or other hard bank stabilization materials should be used only at the toe of the sideslopes up to the ordinary high water mark (OHWM) with the exception of areas directly under bridges for instance. The banks above the OHWM should be restored, stabilized, and revegetated using geotextiles and a mixture of grasses, sedges, wildflowers, shrubs, and trees native to Central Indiana and specifically for stream bank/floodway stabilization purposes as soon as possible upon completion. (IDNR Division of Fish and Wildlife)
15. If box or pipe culverts are used, the bottoms should be buried a minimum of 6 inches (or 20% of the culvert height/pipe diameter, whichever is greater up to a maximum of 2 feet) below the stream bed elevation. Sumping is not required for bridges or three-sided culverts. Crossings must span the entire channel width (a minimum of 1.2 times the ordinary high water mark width) and must maintain the natural stream substrate within the structure (natural stream substrate must be replaced in sumped box and pipe culverts up to the existing flowline). Scour protection at the inlet and outlet must not extend above the existing flowline elevation. Stream depth, channel width and water velocities in the crossing structure during low-flow conditions must approximate those in the natural stream channel. (IDNR Division of Fish and Wildlife)
16. Upgrading wildlife passage for replacement/rehabilitated structures is recommended whenever possible to improve wildlife/vehicle safety. White-tailed deer passage must be incorporated into all new structures. Minimum structure dimensions for white-tailed deer passage are 20 feet of width clearance (overall span of the structure) and 8 feet of height clearance measured from the OHWM. Bank lines must be restored within structures to allow for wildlife passage above the ordinary high water mark. All wildlife passage designs must include a smooth level pathway a minimum of 1-2 feet in width composed of natural substrate (soil, sand, gravel, etc.) or compacted aggregate fill over riprap (#2, #53, #73, etc.) tied into existing elevations both upstream and downstream. There are a number of techniques and materials for incorporating wildlife passage into the design of a crossing structure if restoring bank lines is not an option. (IDNR Division of Fish and Wildlife)

Lead Designation (Des.) Number 1800060

SR 32: Roadway Improvement– Boone County, Indiana

Appendix A: INDOT Supporting Documentation

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Electronic Response	C10
Natural Resources Conservation Service (NRCS)	
Response Letter	C13
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Indiana Department of Natural Resources, Division of Fish and Wildlife (IDNR-DFW)	
Response Letter	C15
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Lead Designation (Des.) Number 1800060

SR 32: Roadway Improvement– Boone County, Indiana

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Categorical Exclusion

Appendix A

INDOT Supporting Documentation

Categorical Exclusion Level Thresholds

	PCE	Level 1	Level 2	Level 3	Level 4 ¹
Section 106	Falls within guidelines of Minor Projects PA	“No Historic Properties Affected”	“No Adverse Effect”	-	“Adverse Effect” Or Historic Bridge involvement ²
Stream Impacts³	No construction in waterways or water bodies	< 300 linear feet of stream impacts	≥ 300 linear feet of stream impacts	-	USACE Individual 404 Permit ⁴
Wetland Impacts³	No adverse impacts to wetlands	< 0.1 acre	-	< 1.0 acre	≥ 1.0 acre
Right-of-way⁵	Property acquisition for preservation only or none	< 0.5 acre	≥ 0.5 acre	-	-
Relocations⁶	None	-	-	< 5	≥ 5
Threatened/Endangered Species (Species Specific Programmatic for Indiana bat & northern long eared bat) *	“No Effect”, “Not likely to Adversely Affect” (With select AMMs ⁷)	“Not likely to Adversely Affect” (With any AMMs or commitments)	-	“Likely to Adversely Affect”	Project does not fall under Species Specific Programmatic ⁸
Threatened/Endangered Species (Any other species) *	Falls within guidelines of USFWS 2013 Interim Policy or “No Effect”	“Not likely to Adversely Affect”	-	-	“Likely to Adversely Affect”
Environmental Justice	No disproportionately high and adverse impacts	-	-	-	Potential ⁹
Sole Source Aquifer	No Detailed Groundwater Assessment	-	-	-	Detailed Groundwater Assessment
Floodplain	No Substantial Impacts	-	-	-	Substantial Impacts
Section 4(f) Impacts	None	-	-	-	Any ¹⁰
Section 6(f) Impacts	None	-	-	-	Any
Permanent Traffic Alteration	None	-	-	-	Any
Noise Analysis Required	No	-	-	-	Yes
Air Quality Analysis Required	No	-	-	-	Yes ¹¹
Approval Level <ul style="list-style-type: none"> • District Env. (DE) • Env. Serv. Div. (ESD) • FHWA 	Concurrence by DE or ESD	DE or ESD	DE or ESD	DE and/or ESD	DE and/or ESD; and FHWA

¹ Coordinate with INDOT Environmental Services Division. INDOT will then coordinate with the appropriate FHWA Environmental Specialist.

² Any involvement with a bridge processed under the Historic Bridge Programmatic Agreement.

³ Total permanent impacts to streams (linear feet) and wetlands (acres).

⁴ US Army Corps of Engineers Individual 404 Permit

⁵ Total permanent and temporary right-of-way. This does not include reacquisition of existing apparent right-of-way.

⁶ If any relocations are within an area with a known or suspected Environmental Justice (EJ) or disadvantaged population, or has greater than 5 relocations, a conversation with FHWA, through INDOT ESD, is needed to confirm NEPA classification and outreach plan for the project.

⁷ Avoidance and Mitigation Measures (AMMs) determined by the IPAC determination key to be required that are not tree AMMs, bridge AMMs, or structure AMMs.

⁸ Projects that do not fall under a Species Specific Programmatic and results in a “Likely to Adversely Affect”. Other findings can be processed as a lower level CE.

⁹ Potential for causing a disproportionately high and adverse impact.

¹⁰ Section 4(f) use resulting in an Individual, Programmatic, or *de minimis* evaluation. The only exception is a *de minimis* evaluation for historic properties (Effective January 2, 2020). If a historic property *de minimis* and no other use, mark the *None* column.

¹¹ Hot Spot Analysis and/or MSAT Quantitative Emission Analysis.

* Includes the threatened/endangered species critical habitat

Note: Substantial public or agency controversy may require a higher-level NEPA document.

Categorical Exclusion

Appendix B

Graphics

General Location
 SR 32: Roadway Improvement Project
 Lead Des. No. 1800060
 Boone County, Indiana

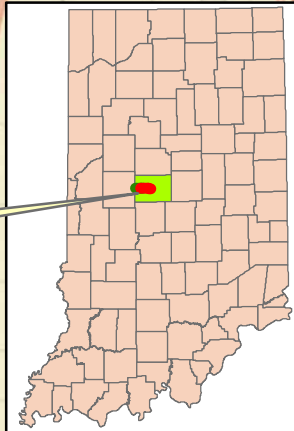


Eastbound Passing Lane 1

Eastbound Passing Lane 2

Westbound Passing Lane 1

Project Area



Legend

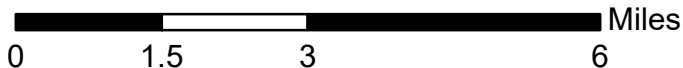
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- Passing Lanes

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 Map Projection: UTM Zone 16 North
 This map is intended to serve as an aid in graphic representation only.
 This information is not warranted for accuracy or other purposes.
 Data obtained from the State of Indiana GIO Library.
 Orthophotography obtained from Indiana Map Framework Data.

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

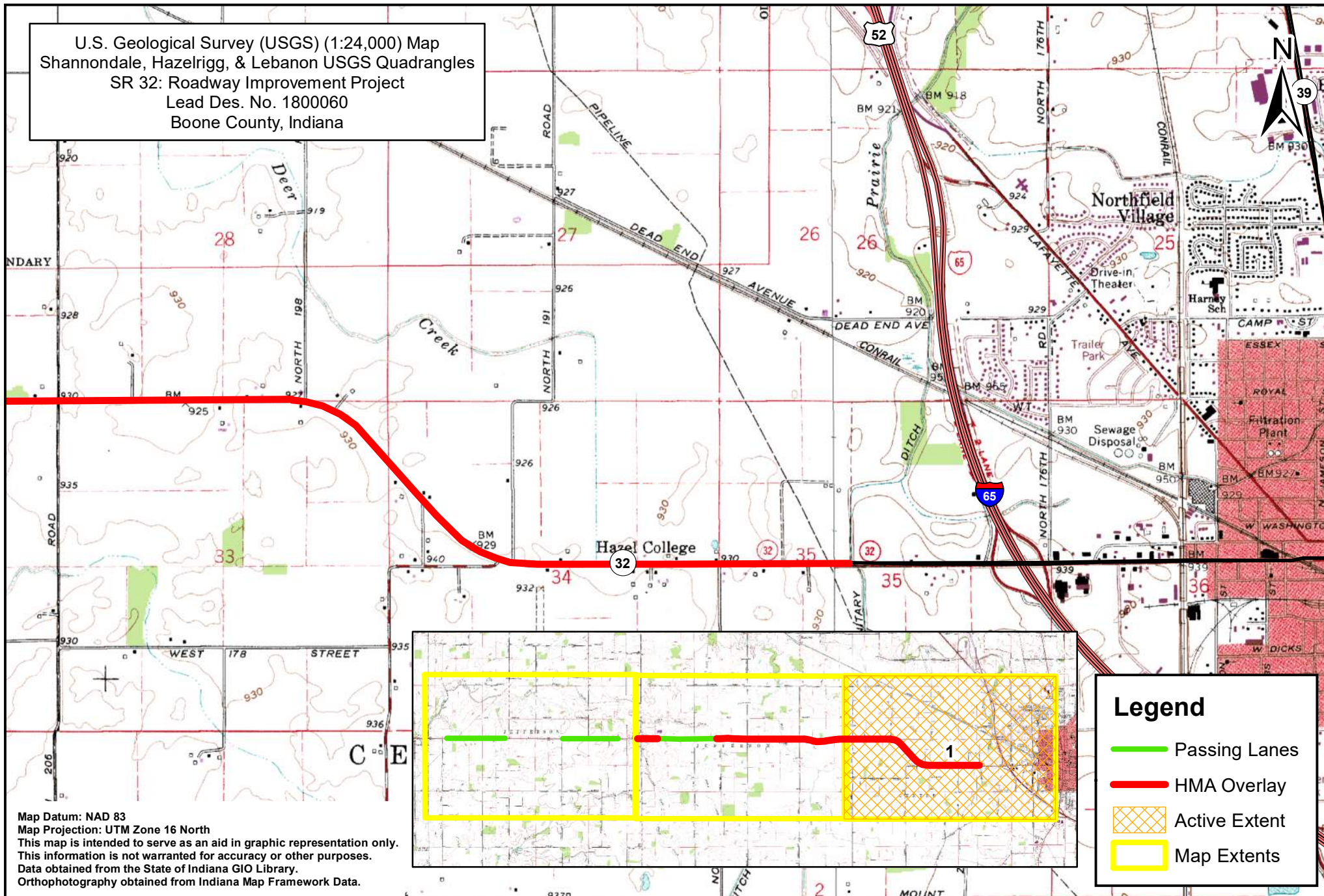


General Location



Location: SR 32
 Township: Jefferson & Center
 County: Boone

U.S. Geological Survey (USGS) (1:24,000) Map
 Shannondale, Hazelrigg, & Lebanon USGS Quadrangles
 SR 32: Roadway Improvement Project
 Lead Des. No. 1800060
 Boone County, Indiana



USGS Topo Map 1 of 3



Township: Jefferson & Center
 County: Boone



U.S. Geological Survey (USGS) (1:24,000) Map
Shannondale, Hazelrigg, & Lebanon USGS Quadrangles
SR 32: Roadway Improvement Project
Lead Des. No. 1800060
Boone County, Indiana

Begin Eastbound
Passing Lane 2

End Eastbound
Passing Lane 2

Legend

- Passing Lanes
- HMA Overlay
- Active Extent
- Map Extents

Map Datum: NAD 83
Map Projection: UTM Zone 16 North
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Data obtained from the State of Indiana GIO Library.
Orthophotography obtained from Indiana Map Framework Data.

USGS Topo Map 2 of 3

0 0.5 1 2 Miles

Township: Jefferson & Center
County: Boone

U.S. Geological Survey (USGS) (1:24,000) Map
Shannondale, Hazelrigg, & Lebanon USGS Quadrangles
SR 32: Roadway Improvement Project
Lead Des. No. 1800060
Boone County, Indiana

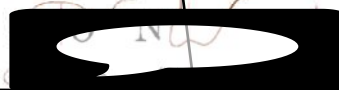


Begin Eastbound
Passing Lane 1

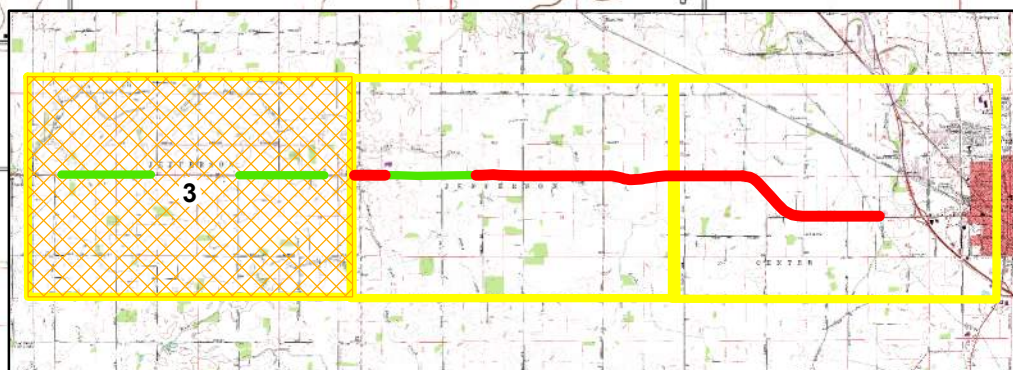
End Eastbound
Passing Lane 1

End Westbound
Passing Lane 1

Begin Westbound
Passing Lane 1



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Legend

- Passing Lanes
- HMA Overlay
- Active Extent
- Map Extents



USGS Topo Map 3 of 3



Township: Jefferson & Center
County: Boone

Photo Location/Aerial Map
SR 32: Roadway Improvement Project
Lead Des. No. 1800060
Boone County, Indiana

Legend

Proposed Permanent ROW

Proposed Temp. ROW

Reacquisition of ROW

Construction Limits

Structure Locations

Photo Points

Streams

Wetlands

Map Extents

Active Extent

HMA Overlay

Passing Lanes

Map Datum: NAD 83
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Data obtained from the State of Indiana GIO Library.
Orthophotography obtained from Indiana Map Framework Data.

Photo Location/Aerial Map 1 of 49

0

40

80

160

Feet

Location: SR 32
Township: Jefferson & Center
County: Boone

Lead Des No. 1800060

Appendix B: Graphics

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Photo Location/Aerial Map
SR 32: Roadway Improvement Project
Lead Des. No. 1800060
Boone County, Indiana

Legend

Proposed Permanent ROW

Proposed Temp. ROW

Reacquisition of ROW

Construction Limits

Structure Locations

Photo Points

Streams

Wetlands

Map Extents

Active Extent

HMA Overlay

Passing Lanes

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Data obtained from the State of Indiana GIO Library.
Orthophotography obtained from Indiana Map Framework Data.

Photo Location/Aerial Map 2 of 49

0

40

80

160

Feet

Location: SR 32
Township: Jefferson & Center
County: Boone

Lead Des No. 1800060

Appendix B: Graphics

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Photo Location/Aerial Map
SR 32: Roadway Improvement Project
Lead Des. No. 1800060
Boone County, Indiana

Legend

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Proposed Permanent ROW

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Proposed Temp. ROW

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Reacquisition of ROW

- - -

Construction Limits

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Structure Locations

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Photo Points

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Streams

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Wetlands

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Map Extents

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Active Extent

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HMA Overlay

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Passing Lanes

Map Datum: NAD 83
Map Projection: UTM Zone 16 North
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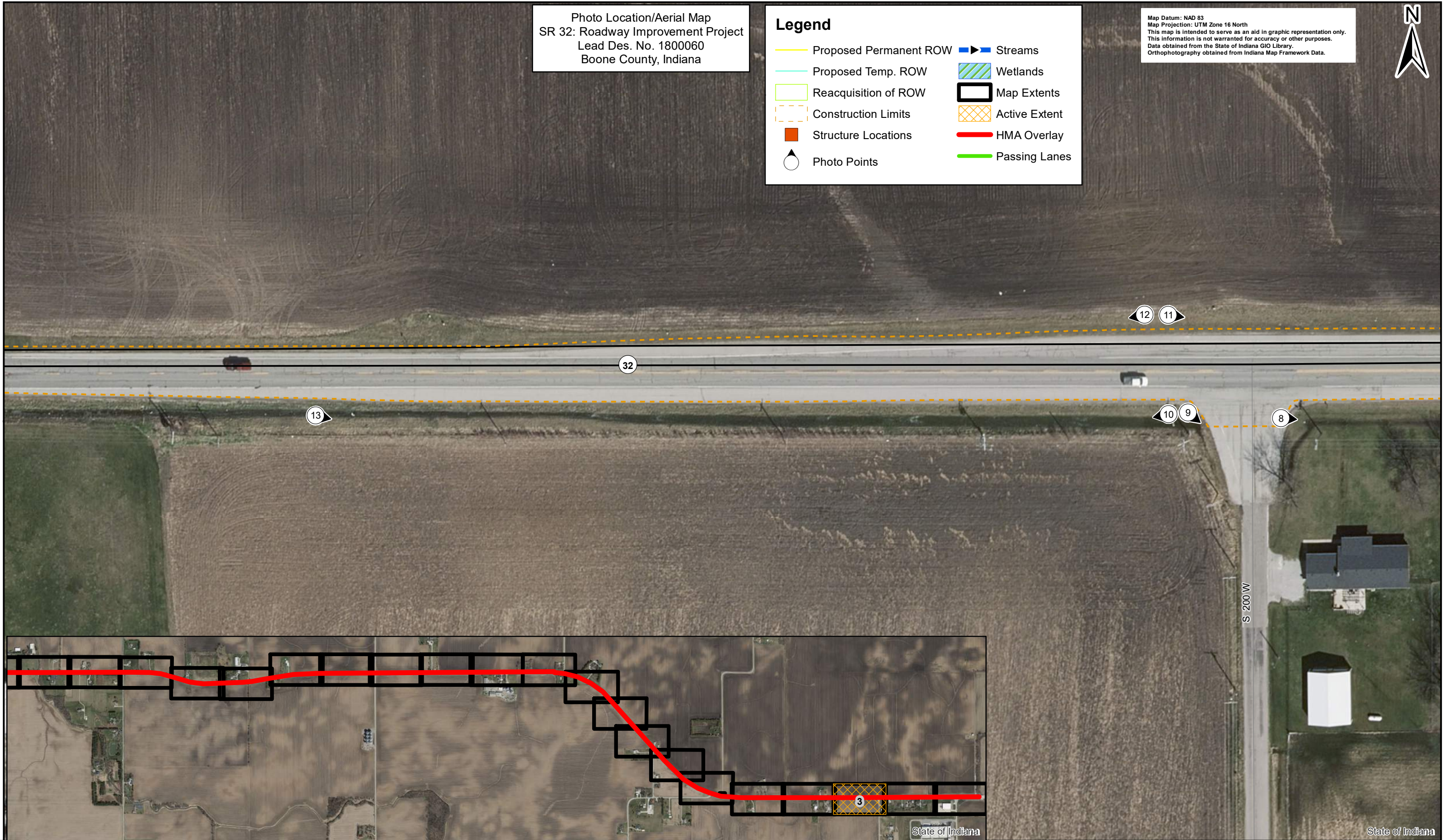


Photo Location/Aerial Map 3 of 49

0

40

80

160

Feet

Location: SR 32
Township: Jefferson & Center
County: Boone

Photo Location/Aerial Map
SR 32: Roadway Improvement Project
Lead Des. No. 1800060
Boone County, Indiana

Legend

Proposed Permanent ROW

Proposed Temp. ROW

Reacquisition of ROW

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Passing Lanes

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Data obtained from the State of Indiana GIO Library.
Orthophotography obtained from Indiana Map Framework Data.

Photo Location/Aerial Map 4 of 49

0

40

80

160

Feet

Location: SR 32
Township: Jefferson & Center
County: Boone

Lead Des No. 1800060

Appendix B: Graphics

B8 of 210

Photo Location/Aerial Map
SR 32: Roadway Improvement Project
Lead Des. No. 1800060
Boone County, Indiana

Legend

Proposed Permanent ROW

Proposed Temp. ROW

Reacquisition of ROW

Construction Limits

Structure Locations

Photo Points

Streams

Wetlands

Map Extents

Active Extent

HMA Overlay

Passing Lanes

Map Datum: NAD 83
Map Projection: UTM Zone 16 North
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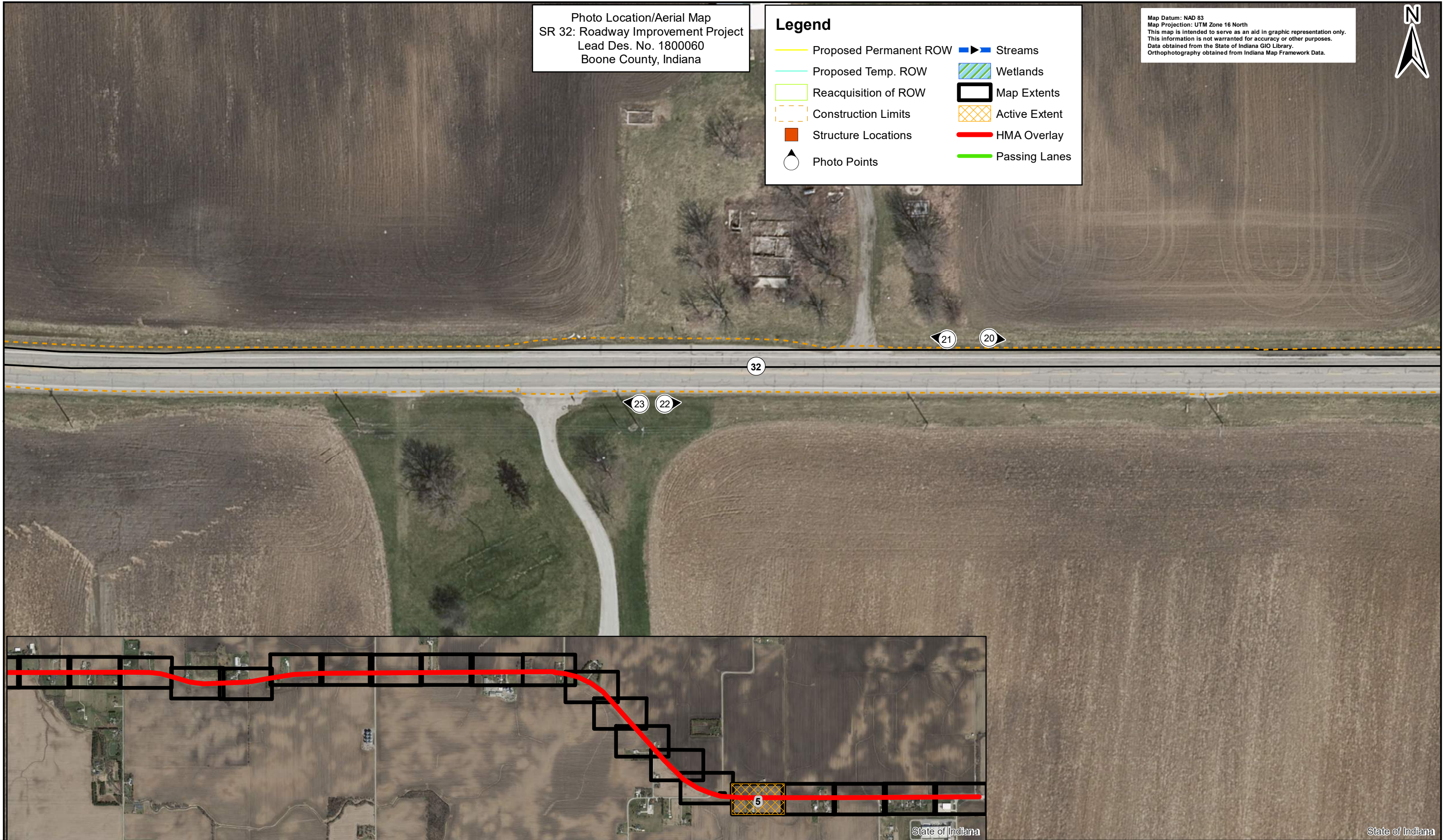


Photo Location/Aerial Map 5 of 49

0

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160

Feet

Location: SR 32
Township: Jefferson & Center
County: Boone

Photo Location/Aerial Map
SR 32: Roadway Improvement Project
Lead Des. No. 1800060
Boone County, Indiana

Legend

Proposed Permanent ROW

Proposed Temp. ROW

Reacquisition of ROW

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Photo Points

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Wetlands

Map Extents

Active Extent

HMA Overlay

Passing Lanes

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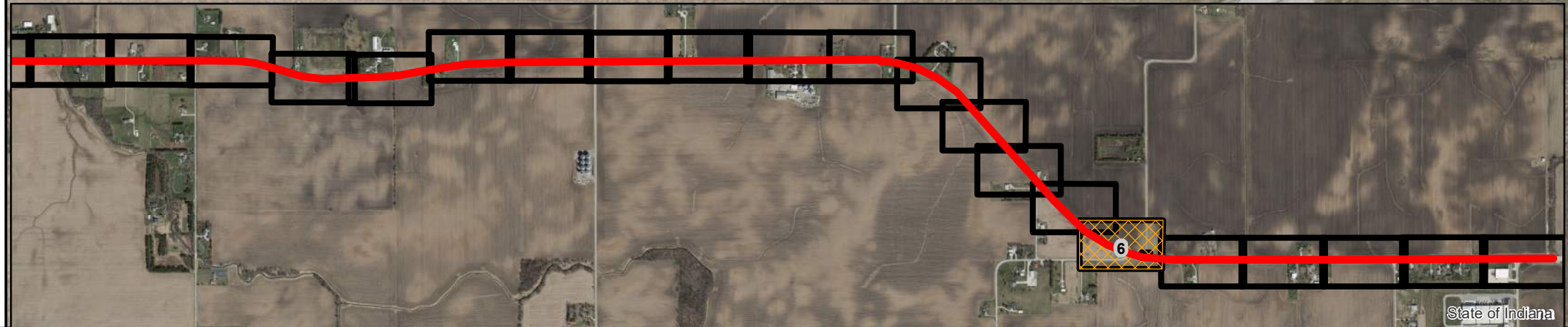
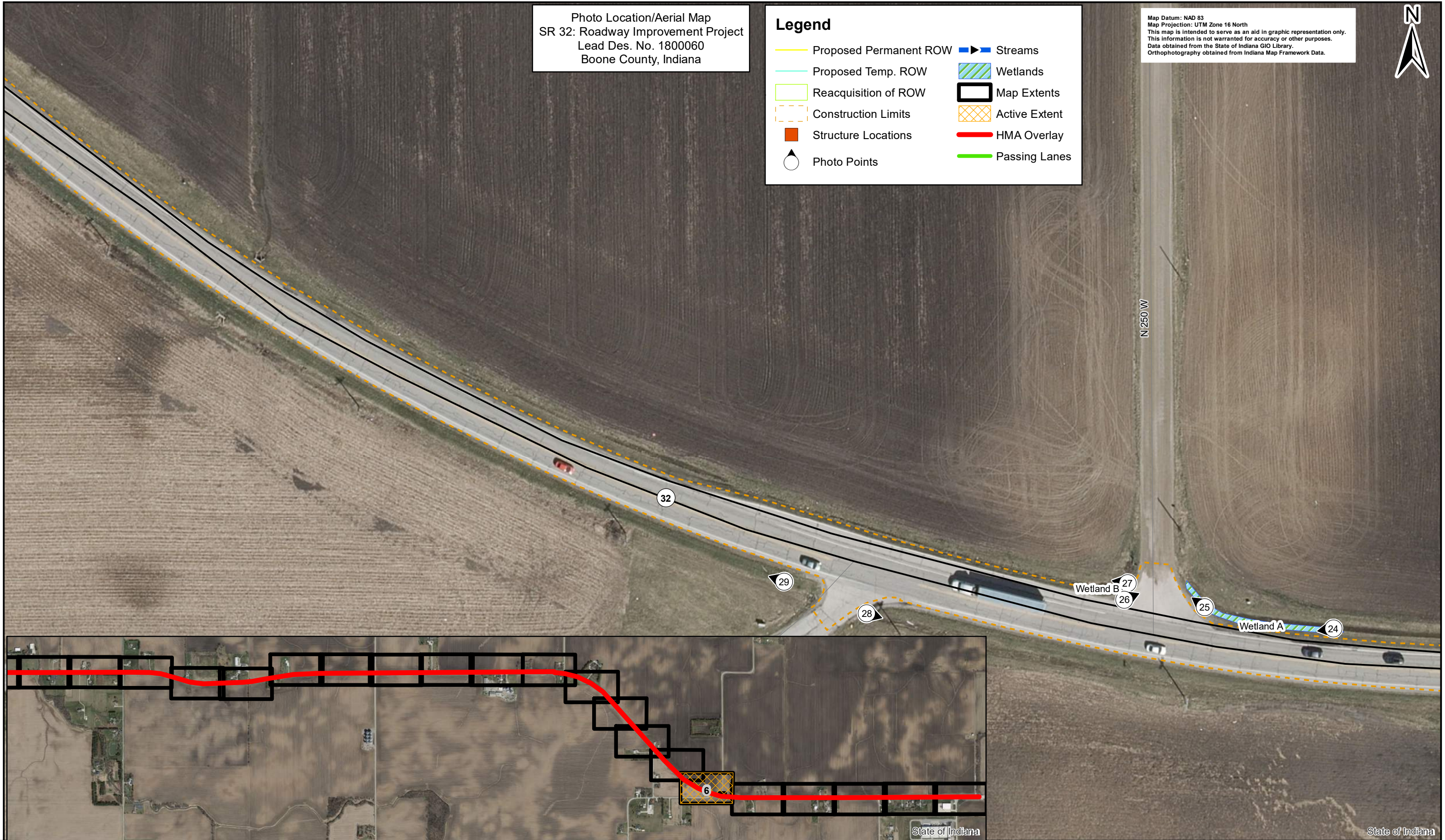


Photo Location/Aerial Map 6 of 49

0

40

80

160

Feet

Location: SR 32
Township: Jefferson & Center
County: Boone

Photo Location/Aerial Map
SR 32: Roadway Improvement Project
Lead Des. No. 1800060
Boone County, Indiana

Legend

Proposed Permanent ROW

Proposed Temp. ROW

Reacquisition of ROW

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Structure Locations

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HMA Overlay

Passing Lanes

Map Datum: NAD 83
Map Projection: UTM Zone 16 North
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Orthophotography obtained from Indiana Map Framework Data.

Photo Location/Aerial Map 7 of 49

Location: SR 32
Township: Jefferson & Center
County: Boone

Lead Des No. 1800060

Appendix B: Graphics

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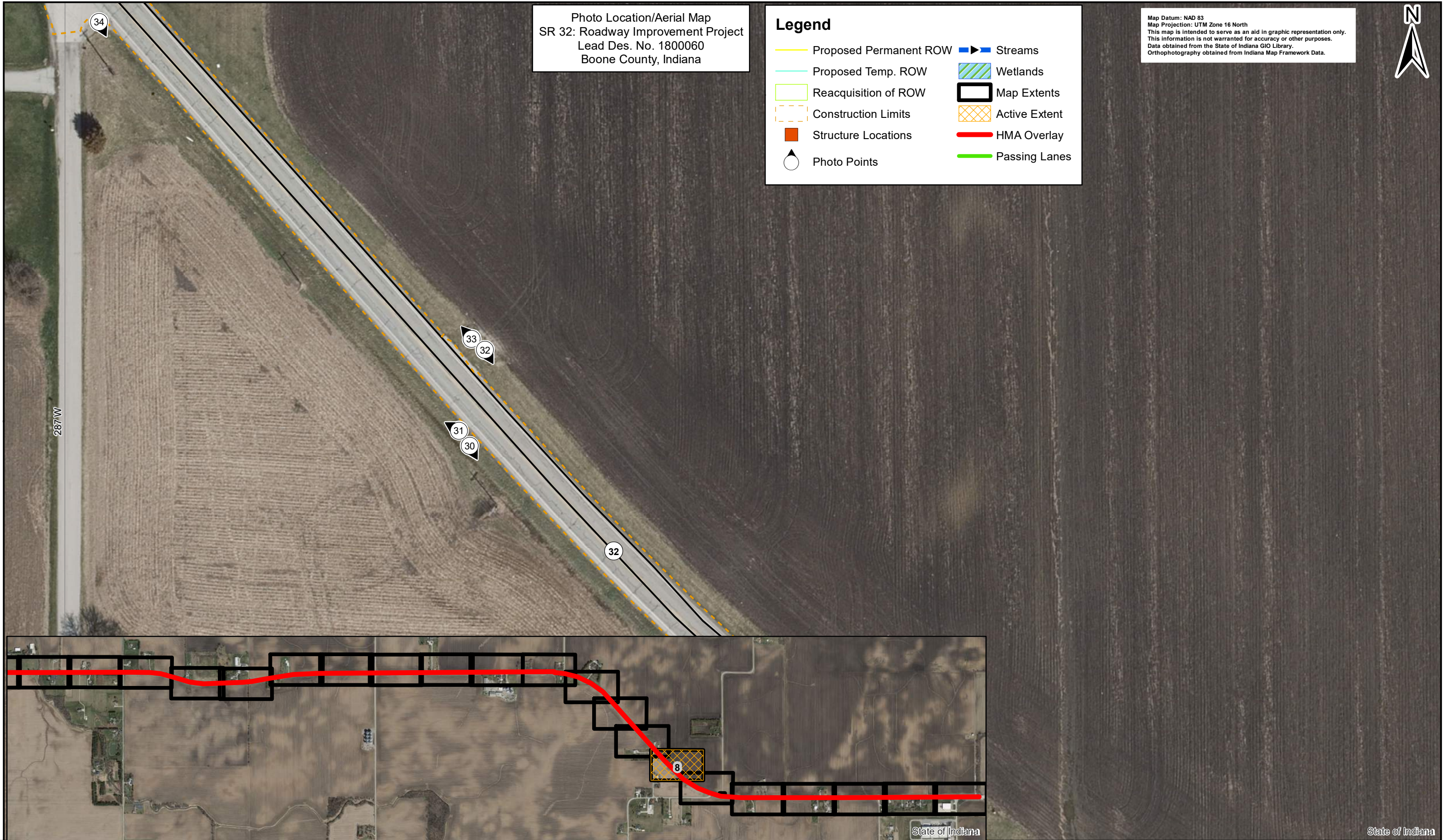


Photo Location/Aerial Map
SR 32: Roadway Improvement Project
Lead Des. No. 1800060
Boone County, Indiana

Legend

- | | |
|---------------------------|-----------------|
| — Proposed Permanent ROW | ▬▬▬ Streams |
| — Proposed Temp. ROW | ▨ Wetlands |
| ▭ Reacquisition of ROW | ▭ Map Extents |
| - - - Construction Limits | ▨ Active Extent |
| ■ Structure Locations | — HMA Overlay |
| ▲ Photo Points | — Passing Lanes |

Map Datum: NAD 83
Map Projection: UTM Zone 16 North
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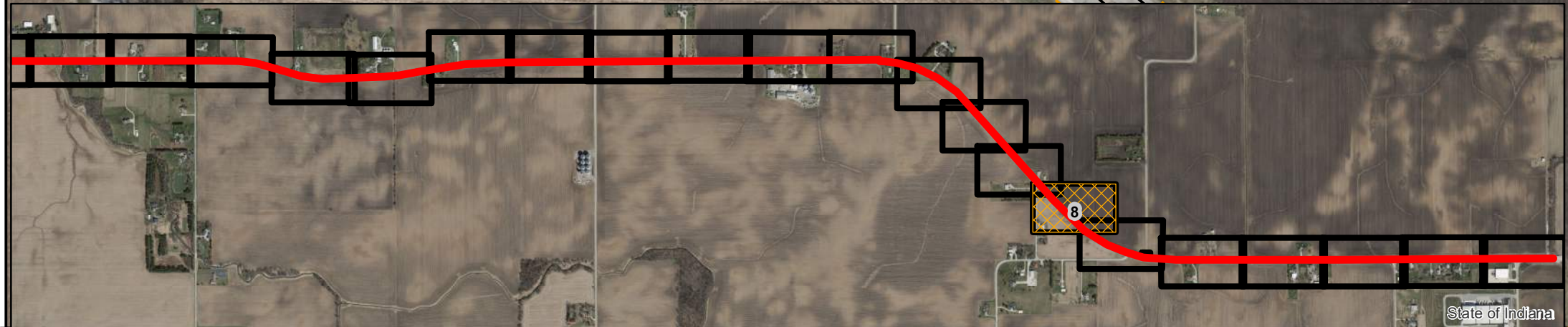
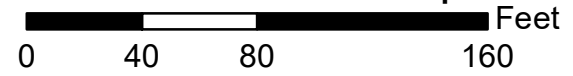


Photo Location/Aerial Map 8 of 49



Location: SR 32
Township: Jefferson & Center
County: Boone

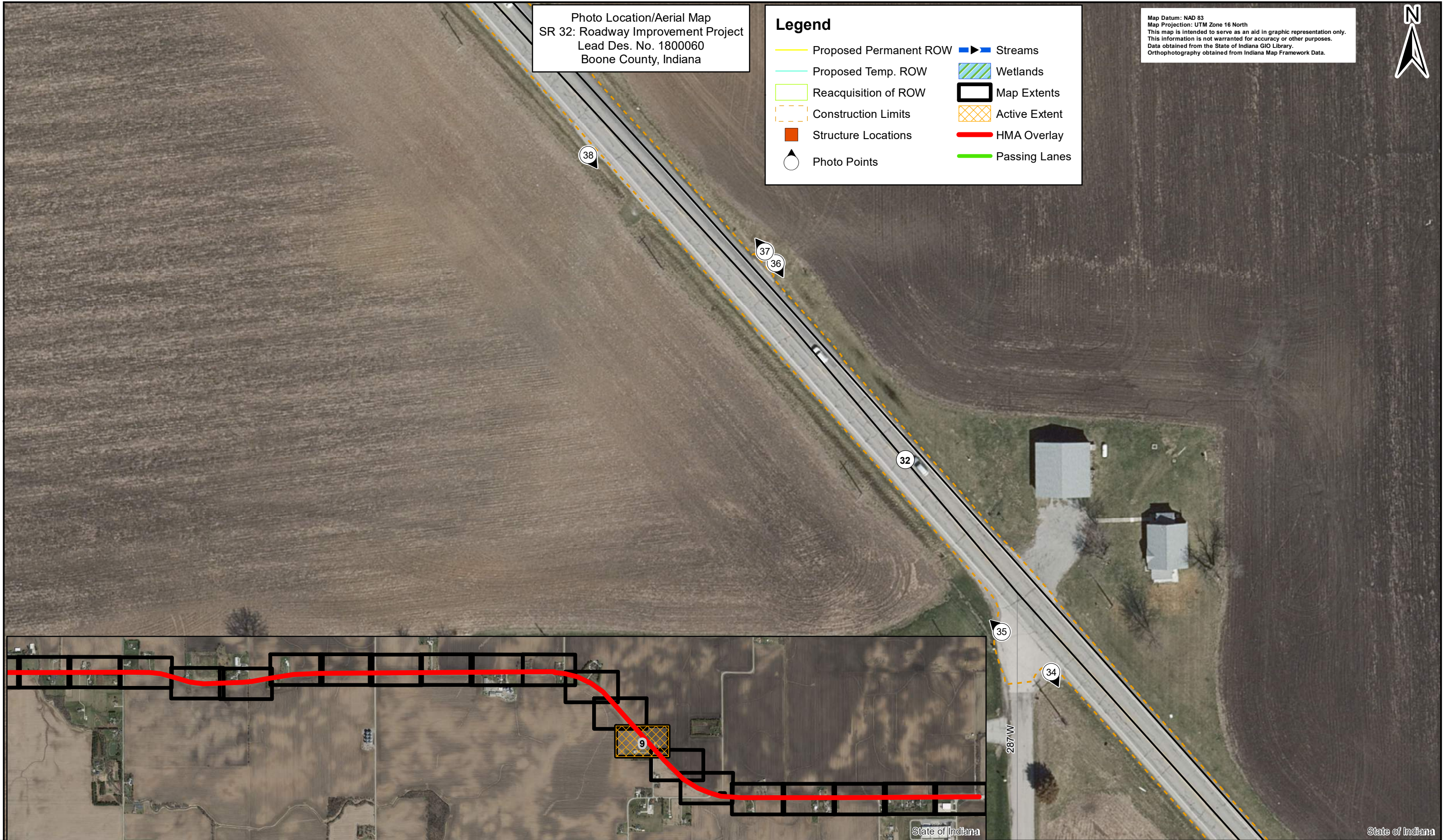


Photo Location/Aerial Map
SR 32: Roadway Improvement Project
Lead Des. No. 1800060
Boone County, Indiana

Legend

Proposed Permanent ROW

Proposed Temp. ROW

Reacquisition of ROW

Construction Limits

Structure Locations

Photo Points

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Wetlands

Map Extents

Active Extent

HMA Overlay

Passing Lanes

Map Datum: NAD 83
Map Projection: UTM Zone 16 North
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Data obtained from the State of Indiana GIO Library.
Orthophotography obtained from Indiana Map Framework Data.

State of Indiana

State of Indiana

Photo Location/Aerial Map 9 of 49

Location: SR 32
Township: Jefferson & Center
County: Boone

Lead Des No. 1800060

Appendix B: Graphics

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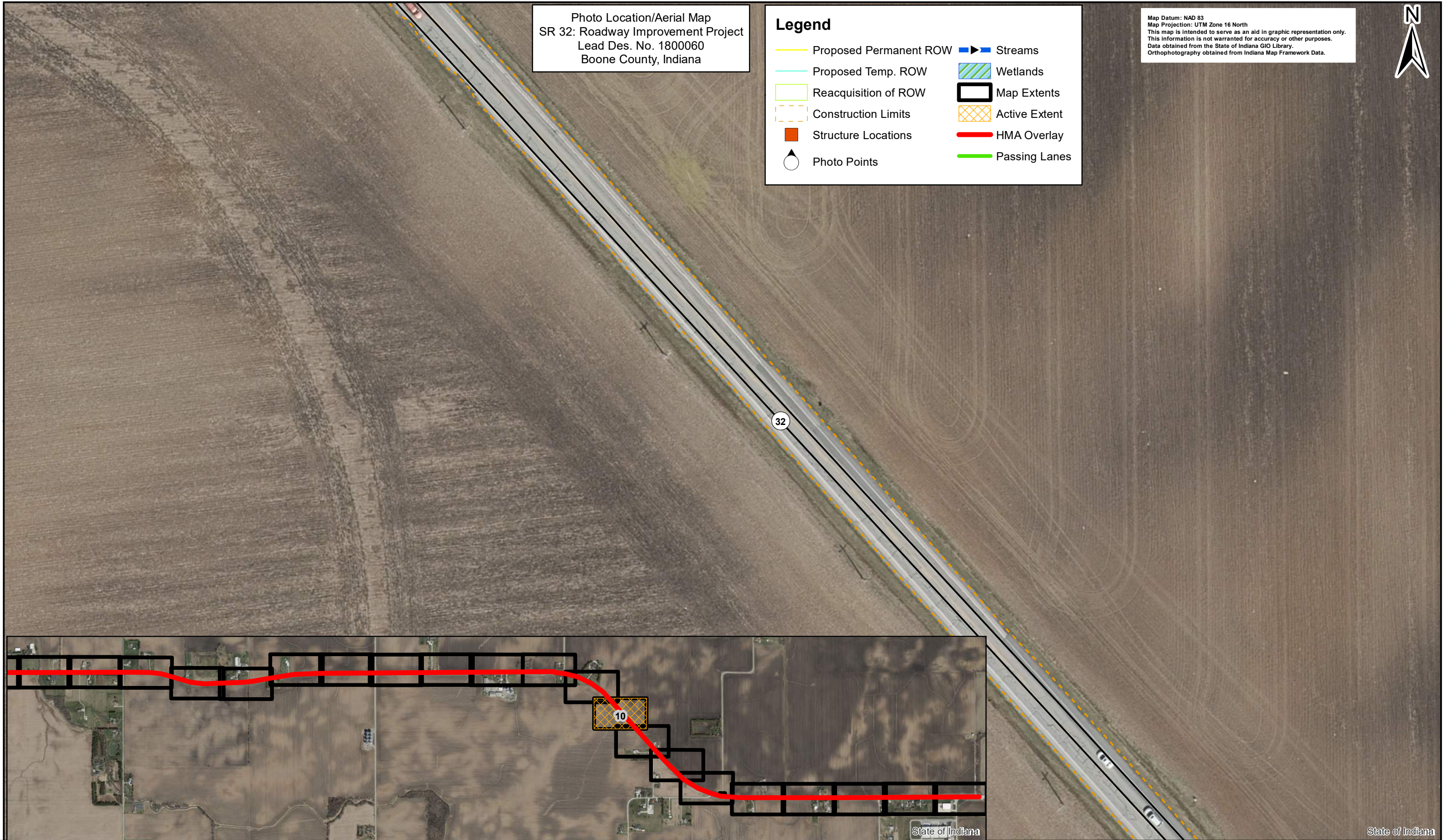


Photo Location/Aerial Map
SR 32: Roadway Improvement Project
Lead Des. No. 1800060
Boone County, Indiana

Legend

- | | |
|------------------------|---------------|
| Proposed Permanent ROW | Streams |
| Proposed Temp. ROW | Wetlands |
| Reacquisition of ROW | Map Extents |
| Construction Limits | Active Extent |
| Structure Locations | HMA Overlay |
| Photo Points | Passing Lanes |

Map Datum: NAD 83
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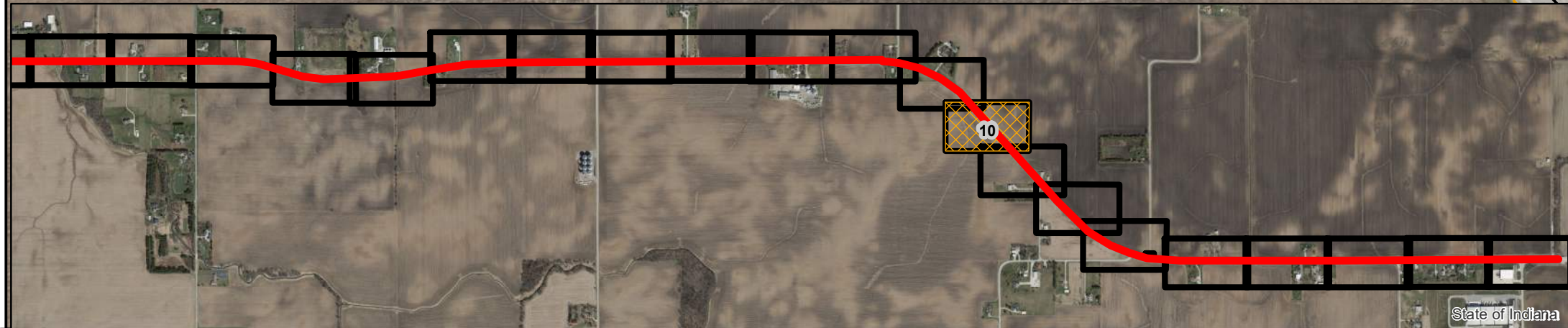
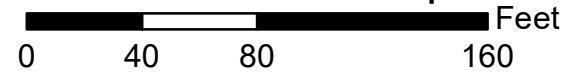


Photo Location/Aerial Map 10 of 49



Location: SR 32
Township: Jefferson & Center
County: Boone

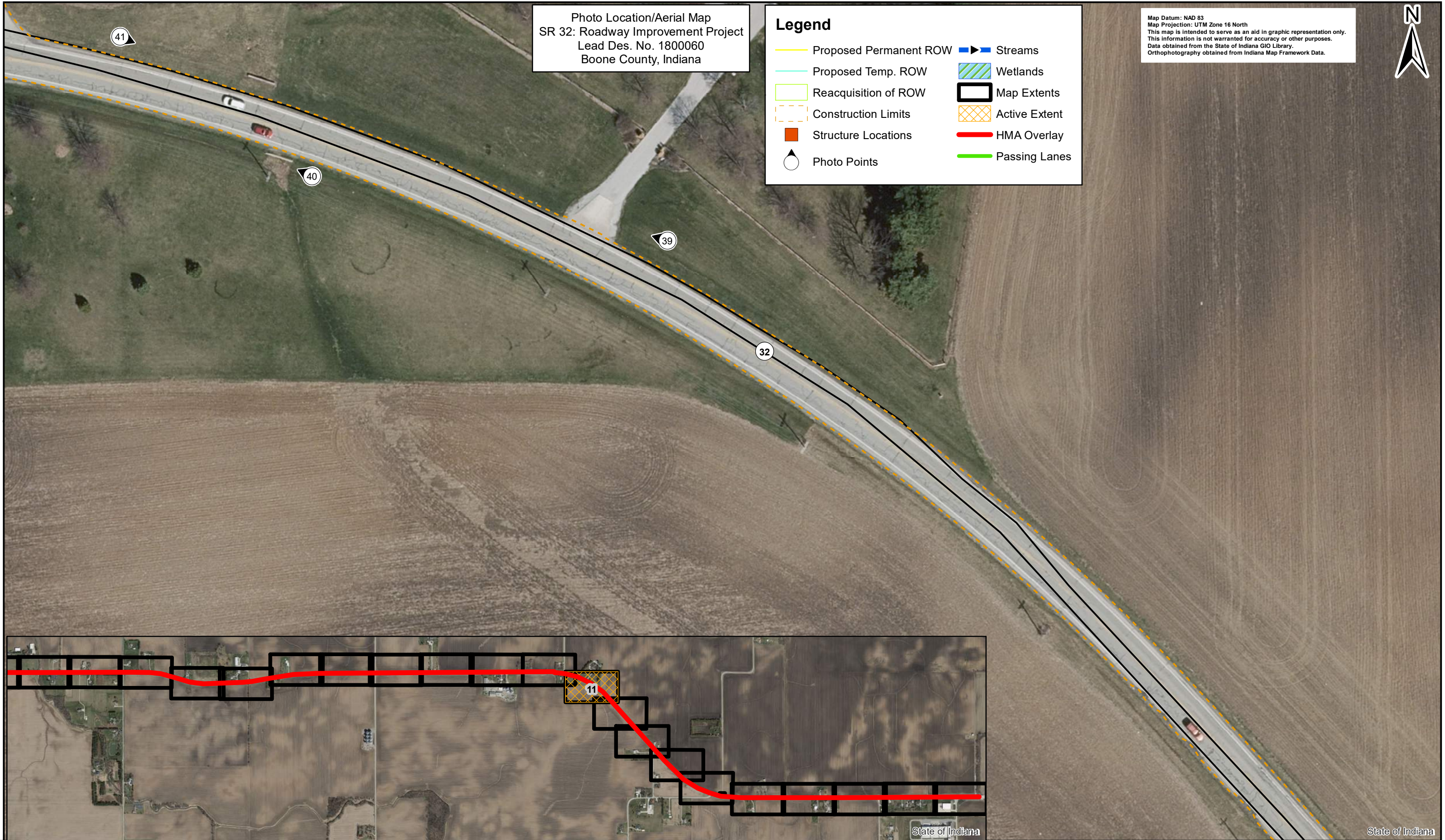


Photo Location/Aerial Map
SR 32: Roadway Improvement Project
Lead Des. No. 1800060
Boone County, Indiana

Legend

Proposed Permanent ROW

Proposed Temp. ROW

Reacquisition of ROW

Construction Limits

Structure Locations

Photo Points

Streams

Wetlands

Map Extents

Active Extent

HMA Overlay

Passing Lanes

Map Datum: NAD 83
Map Projection: UTM Zone 16 North
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Data obtained from the State of Indiana GIO Library.
Orthophotography obtained from Indiana Map Framework Data.

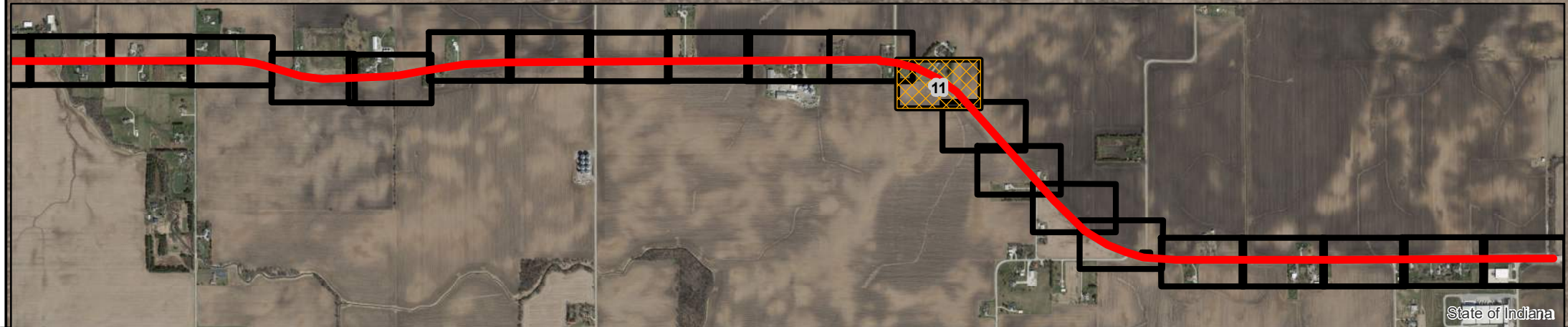


Photo Location/Aerial Map 11 of 49

0

40

80

160

Feet

Location: SR 32
Township: Jefferson & Center
County: Boone

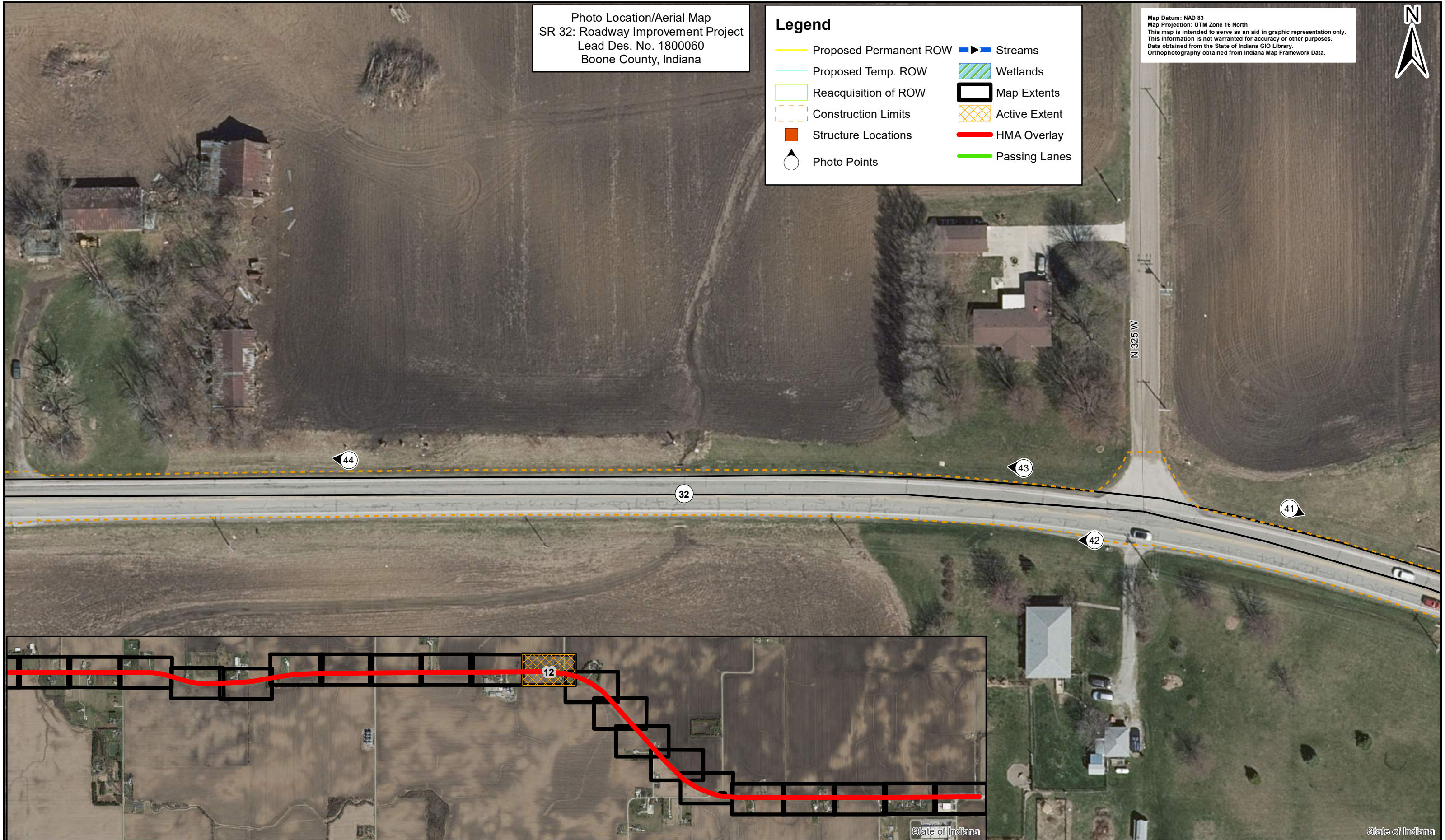


Photo Location/Aerial Map
SR 32: Roadway Improvement Project
Lead Des. No. 1800060
Boone County, Indiana

Legend

Proposed Permanent ROW

Proposed Temp. ROW

Reacquisition of ROW

Construction Limits

Structure Locations

Photo Points

Streams

Wetlands

Map Extents

Active Extent

HMA Overlay

Passing Lanes

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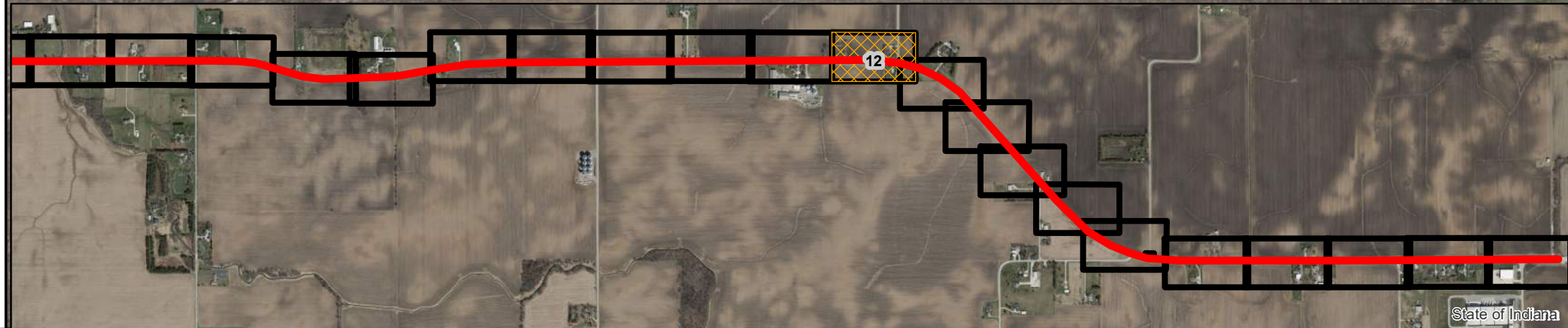
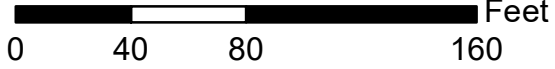


Photo Location/Aerial Map 12 of 49



Location: SR 32
Township: Jefferson & Center
County: Boone

Photo Location/Aerial Map
SR 32: Roadway Improvement Project
Lead Des. No. 1800060
Boone County, Indiana

Legend

Proposed Permanent ROW

Proposed Temp. ROW

Reacquisition of ROW

Construction Limits

Structure Locations

Photo Points

Streams

Wetlands

Map Extents

Active Extent

HMA Overlay

Passing Lanes

Map Datum: NAD 83
Map Projection: UTM Zone 16 North
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This information is not warranted for accuracy or other purposes.
Data obtained from the State of Indiana GIO Library.
Orthophotography obtained from Indiana Map Framework Data.

Photo Location/Aerial Map 13 of 49

Location: SR 32
Township: Jefferson & Center
County: Boone

Lead Des No. 1800060

Appendix B: Graphics

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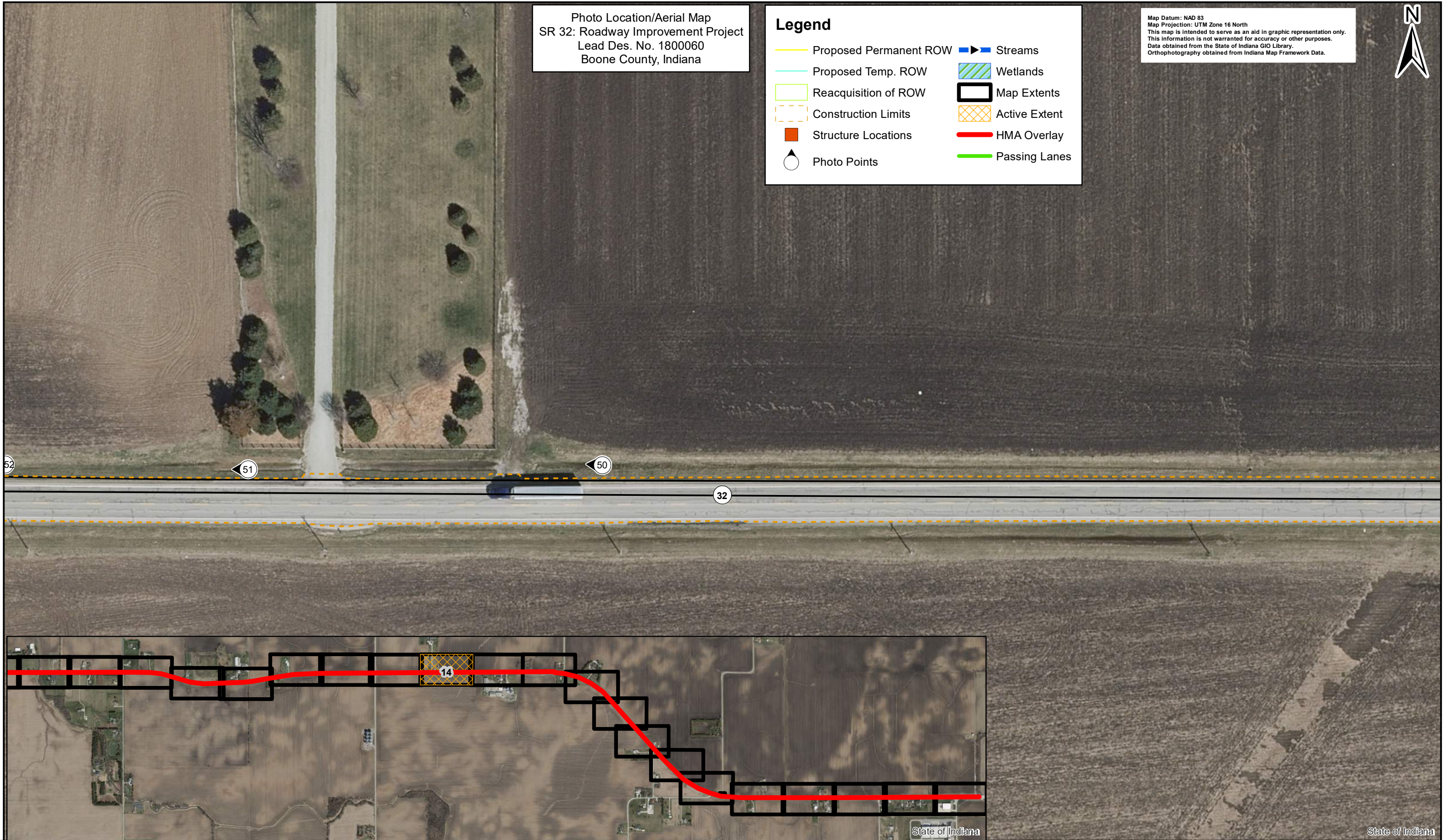


Photo Location/Aerial Map
SR 32: Roadway Improvement Project
Lead Des. No. 1800060
Boone County, Indiana

Legend

Proposed Permanent ROW

Proposed Temp. ROW

Reacquisition of ROW

Construction Limits

Structure Locations

Photo Points

Streams

Wetlands

Map Extents

Active Extent

HMA Overlay

Passing Lanes

Map Datum: NAD 83
Map Projection: UTM Zone 16 North
This map is intended to serve as an aid in graphic representation only.
This information is not warranted for accuracy or other purposes.
Data obtained from the State of Indiana GIO Library.
Orthophotography obtained from Indiana Map Framework Data.

Photo Location/Aerial Map 14 of 49

0

40

80

160

Feet

Location: SR 32
Township: Jefferson & Center
County: Boone

Lead Des No. 1800060

Appendix B: Graphics

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Photo Location/Aerial Map
SR 32: Roadway Improvement Project
Lead Des. No. 1800060
Boone County, Indiana

Legend

Proposed Permanent ROW

Proposed Temp. ROW

Reacquisition of ROW

Construction Limits

Structure Locations

Photo Points

Streams

Wetlands

Map Extents

Active Extent

HMA Overlay

Passing Lanes

Map Datum: NAD 83
Map Projection: UTM Zone 16 North
This map is intended to serve as an aid in graphic representation only.
This information is not warranted for accuracy or other purposes.
Data obtained from the State of Indiana GIO Library.
Orthophotography obtained from Indiana Map Framework Data.

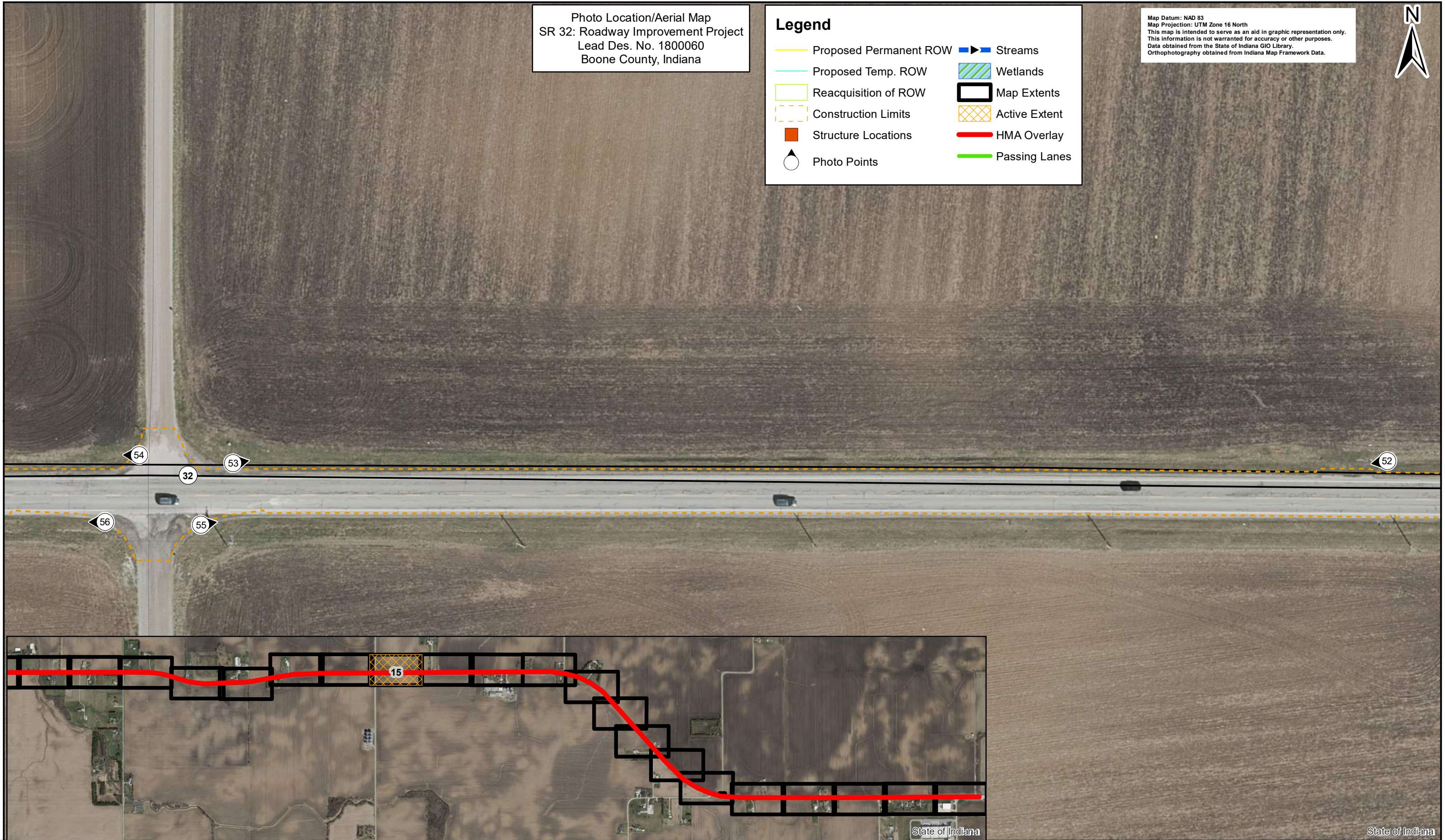
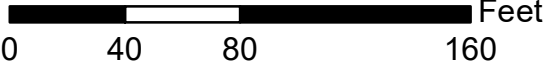


Photo Location/Aerial Map 15 of 49



Location: SR 32
Township: Jefferson & Center
County: Boone

Photo Location/Aerial Map
SR 32: Roadway Improvement Project
Lead Des. No. 1800060
Boone County, Indiana

Legend

Proposed Permanent ROW

Proposed Temp. ROW

Reacquisition of ROW

Construction Limits

Structure Locations

Photo Points

Streams

Wetlands

Map Extents

Active Extent

HMA Overlay

Passing Lanes

Map Datum: NAD 83
Map Projection: UTM Zone 16 North
This map is intended to serve as an aid in graphic representation only.
This information is not warranted for accuracy or other purposes.
Data obtained from the State of Indiana GIO Library.
Orthophotography obtained from Indiana Map Framework Data.

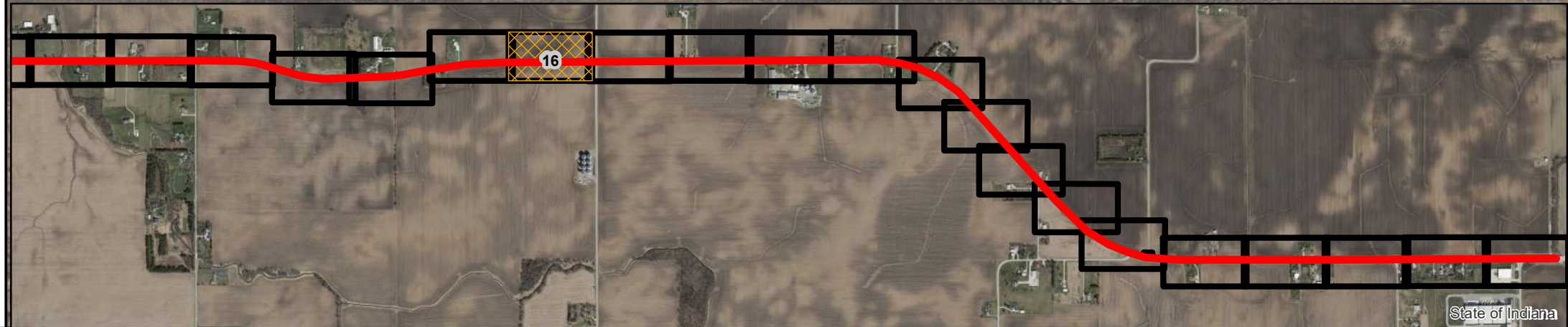
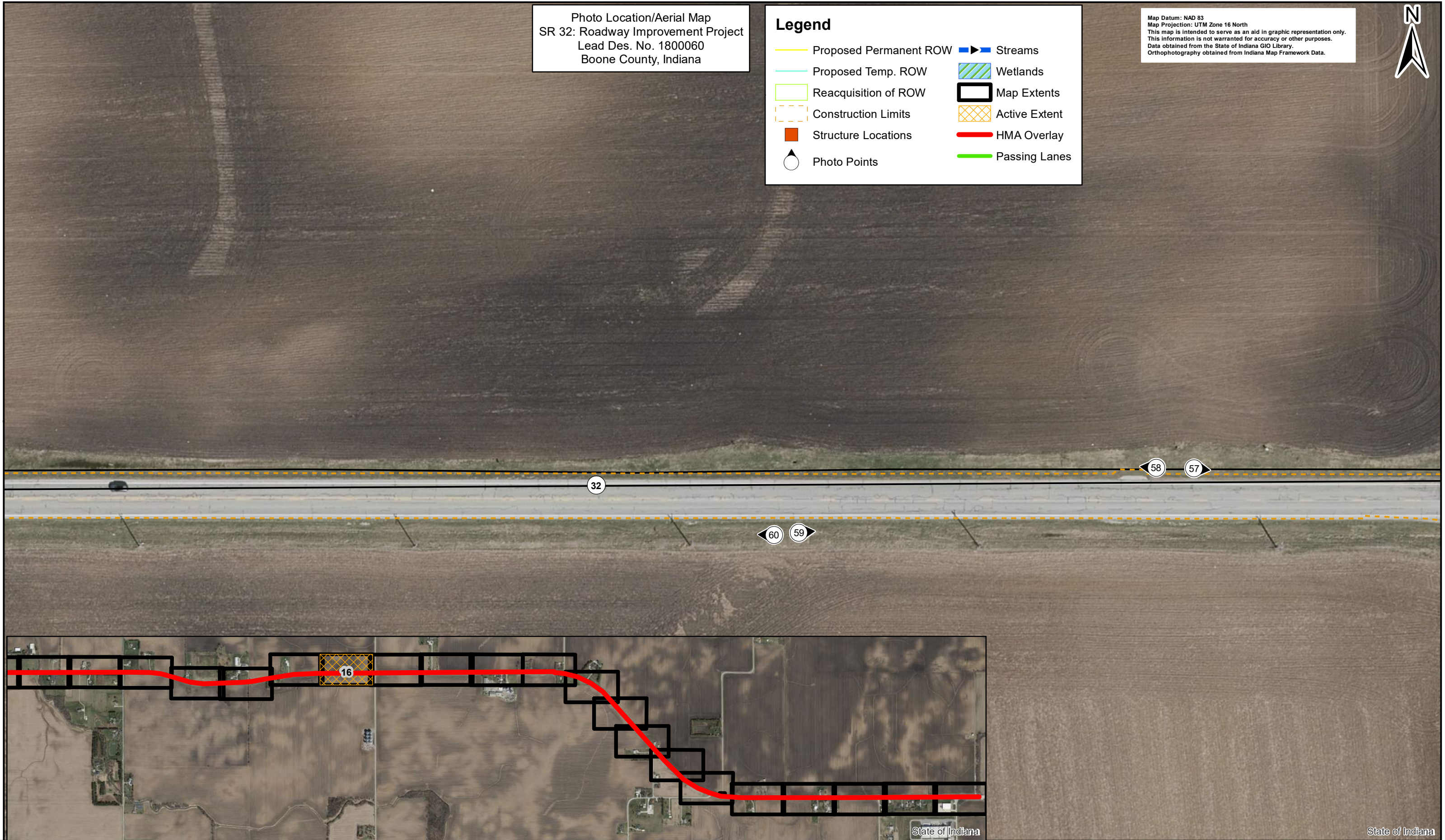
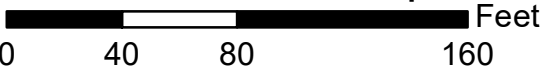


Photo Location/Aerial Map 16 of 49



Location: SR 32
Township: Jefferson & Center
County: Boone

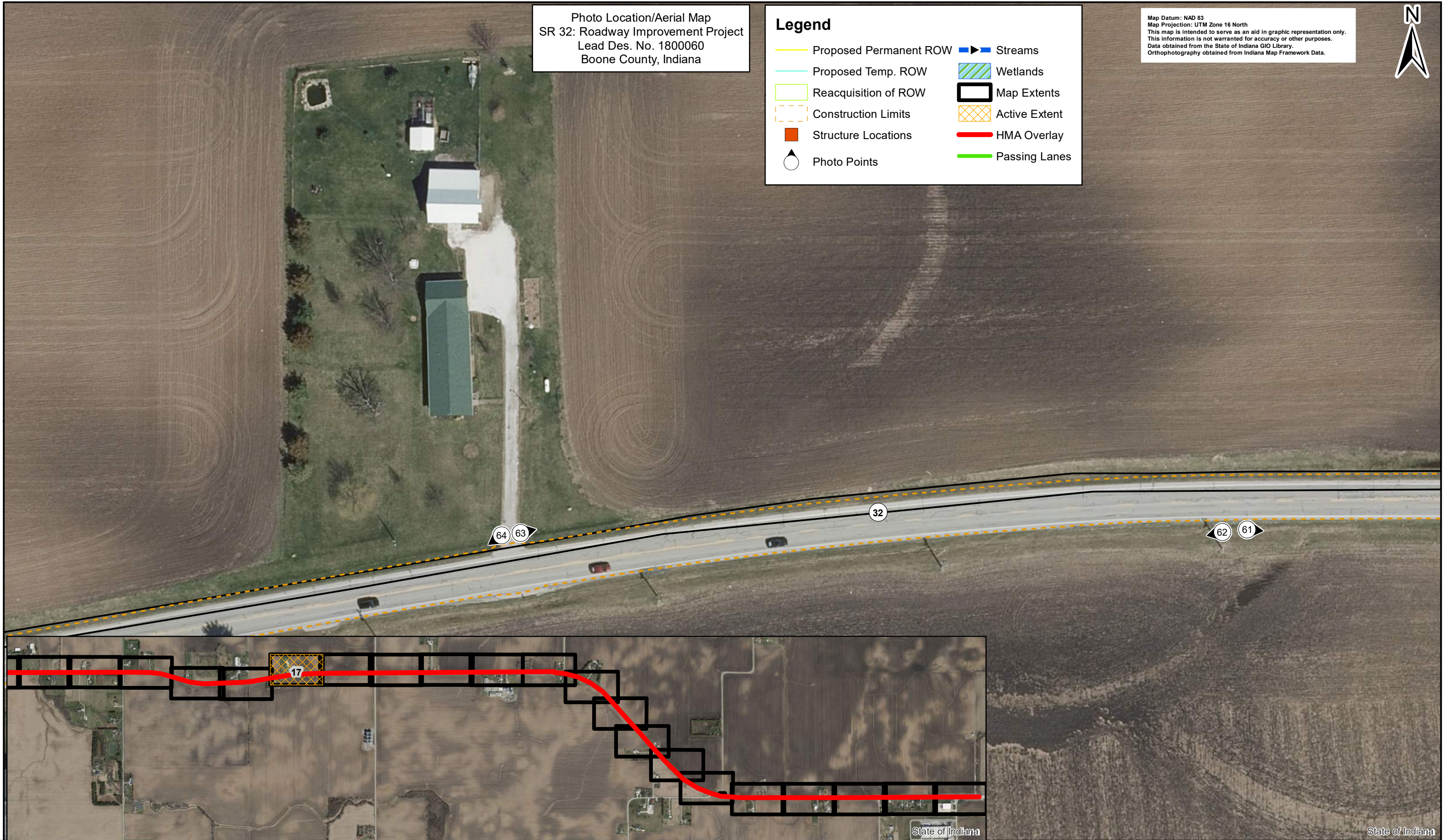


Photo Location/Aerial Map
SR 32: Roadway Improvement Project
Lead Des. No. 1800060
Boone County, Indiana

Legend

Proposed Permanent ROW

Proposed Temp. ROW

Reacquisition of ROW

Construction Limits

Structure Locations

Photo Points

Streams

Wetlands

Map Extents

Active Extent

HMA Overlay

Passing Lanes

Map Datum: NAD 83
Map Projection: UTM Zone 16 North
This map is intended to serve as an aid in graphic representation only.
This information is not warranted for accuracy or other purposes.
Data obtained from the State of Indiana GIO Library.
Orthophotography obtained from Indiana Map Framework Data.

Photo Location/Aerial Map 17 of 49

Location: SR 32
Township: Jefferson & Center
County: Boone

Lead Des No. 1800060

Appendix B: Graphics

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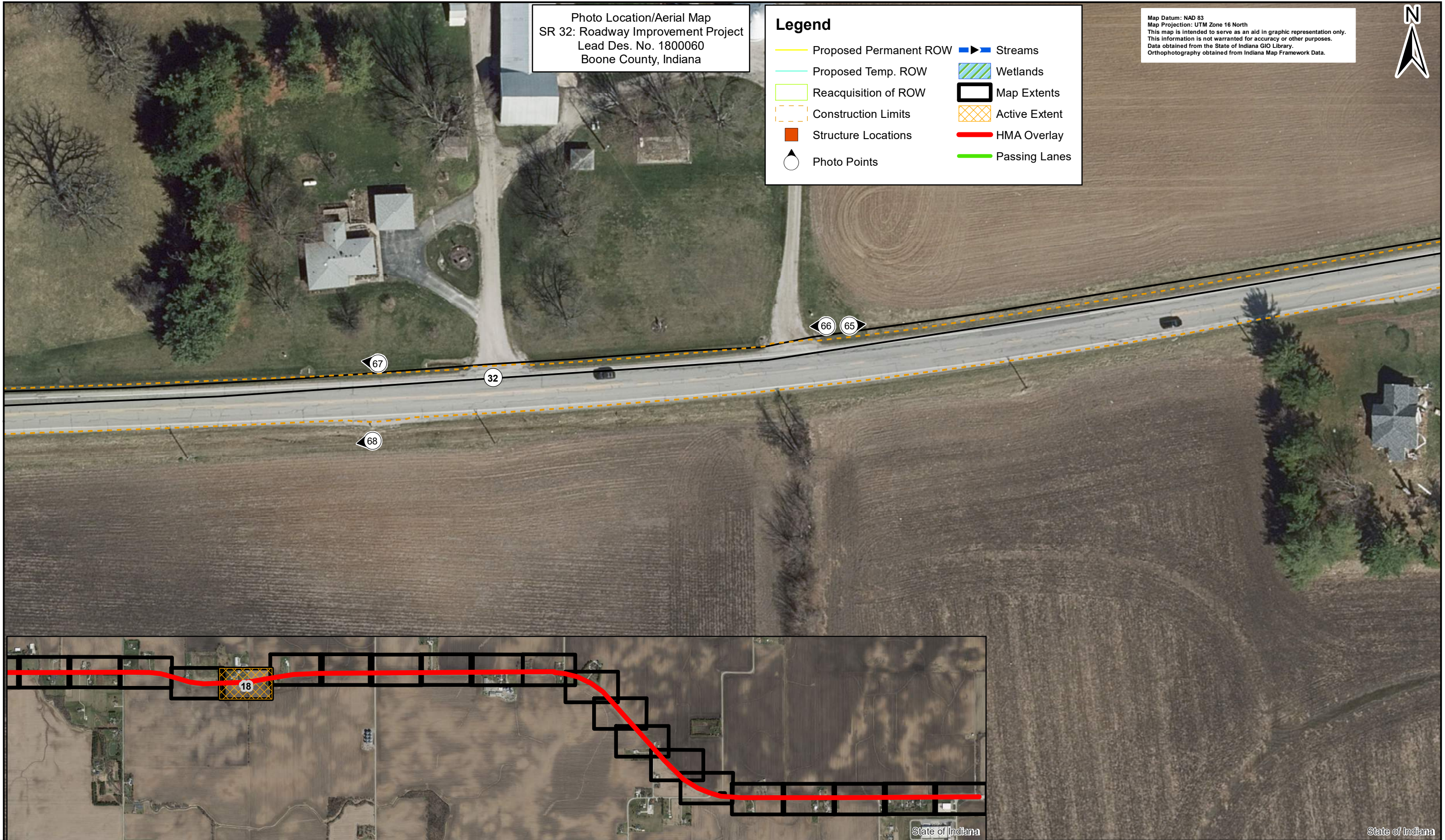


Photo Location/Aerial Map
SR 32: Roadway Improvement Project
Lead Des. No. 1800060
Boone County, Indiana

Legend

Proposed Permanent ROW

Proposed Temp. ROW

Reacquisition of ROW

Construction Limits

Structure Locations

Photo Points

Streams

Wetlands

Map Extents

Active Extent

HMA Overlay

Passing Lanes

Map Datum: NAD 83
Map Projection: UTM Zone 16 North
This map is intended to serve as an aid in graphic representation only.
This information is not warranted for accuracy or other purposes.
Data obtained from the State of Indiana GIO Library.
Orthophotography obtained from Indiana Map Framework Data.

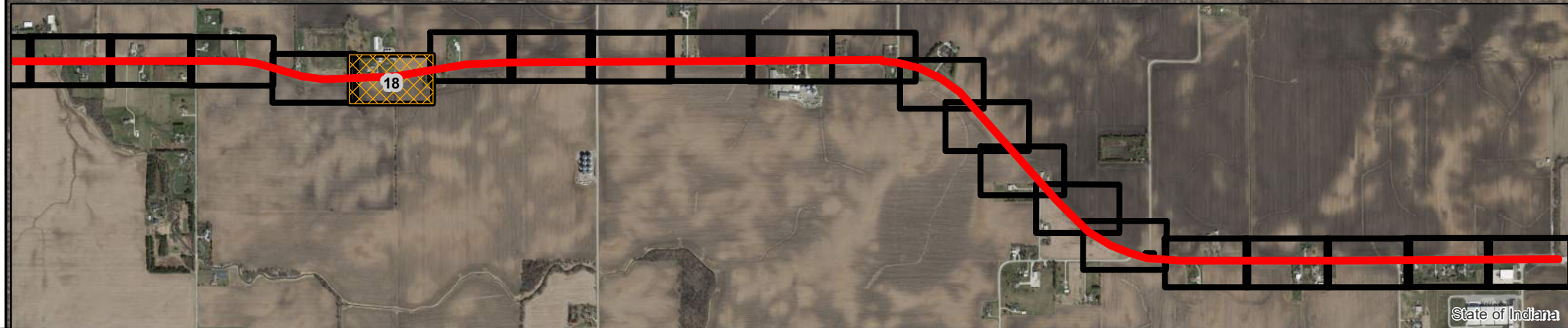
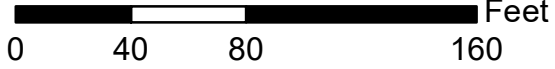


Photo Location/Aerial Map 18 of 49



Location: SR 32
Township: Jefferson & Center
County: Boone

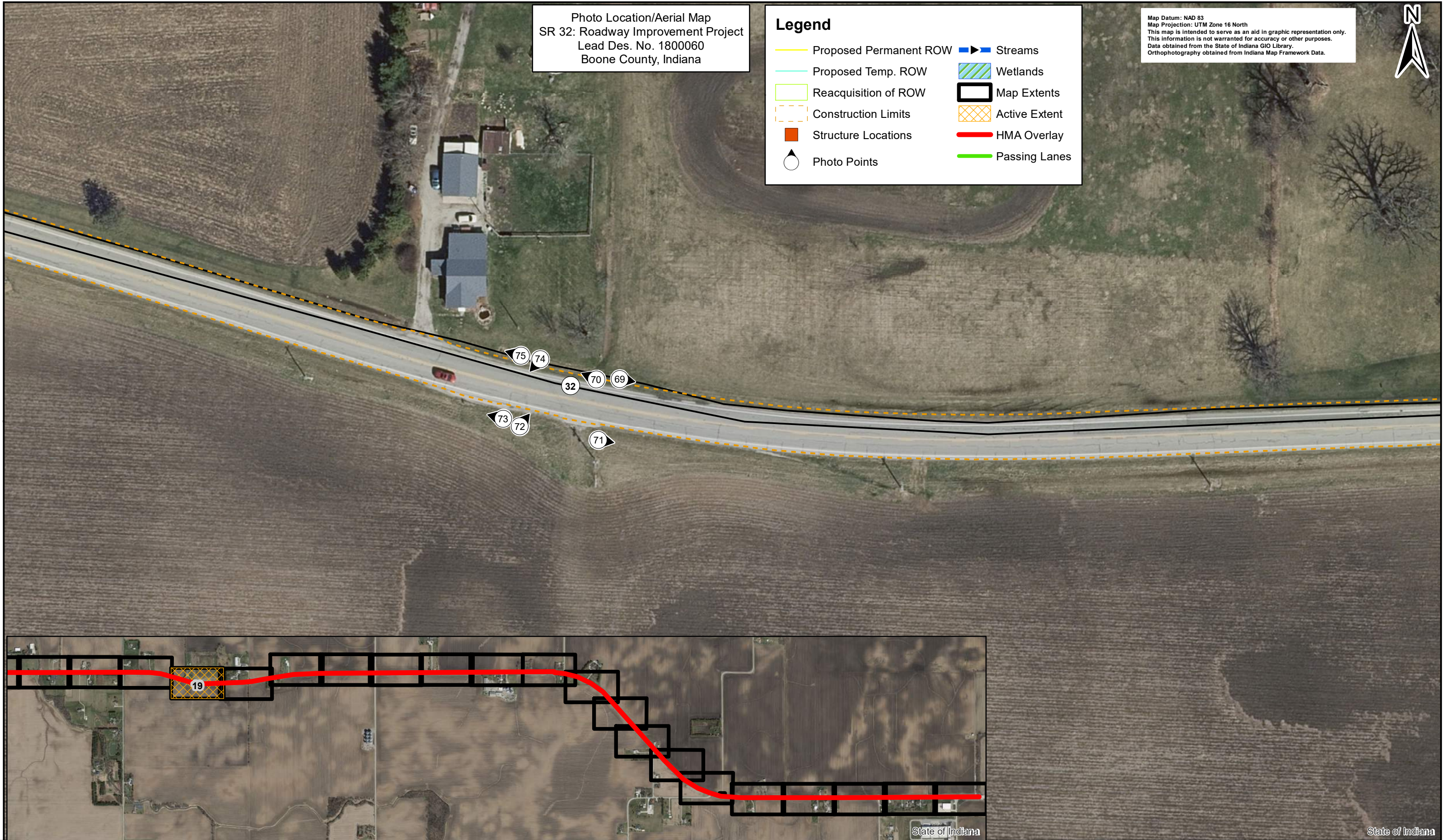


Photo Location/Aerial Map
SR 32: Roadway Improvement Project
Lead Des. No. 1800060
Boone County, Indiana

Legend

Proposed Permanent ROW

Proposed Temp. ROW

Reacquisition of ROW

Construction Limits

Structure Locations

Photo Points

Streams

Wetlands

Map Extents

Active Extent

HMA Overlay

Passing Lanes

Map Datum: NAD 83
Map Projection: UTM Zone 16 North
This map is intended to serve as an aid in graphic representation only.
This information is not warranted for accuracy or other purposes.
Data obtained from the State of Indiana GIO Library.
Orthophotography obtained from Indiana Map Framework Data.

Photo Location/Aerial Map 19 of 49

Location: SR 32
Township: Jefferson & Center
County: Boone

Lead Des No. 1800060

Appendix B: Graphics

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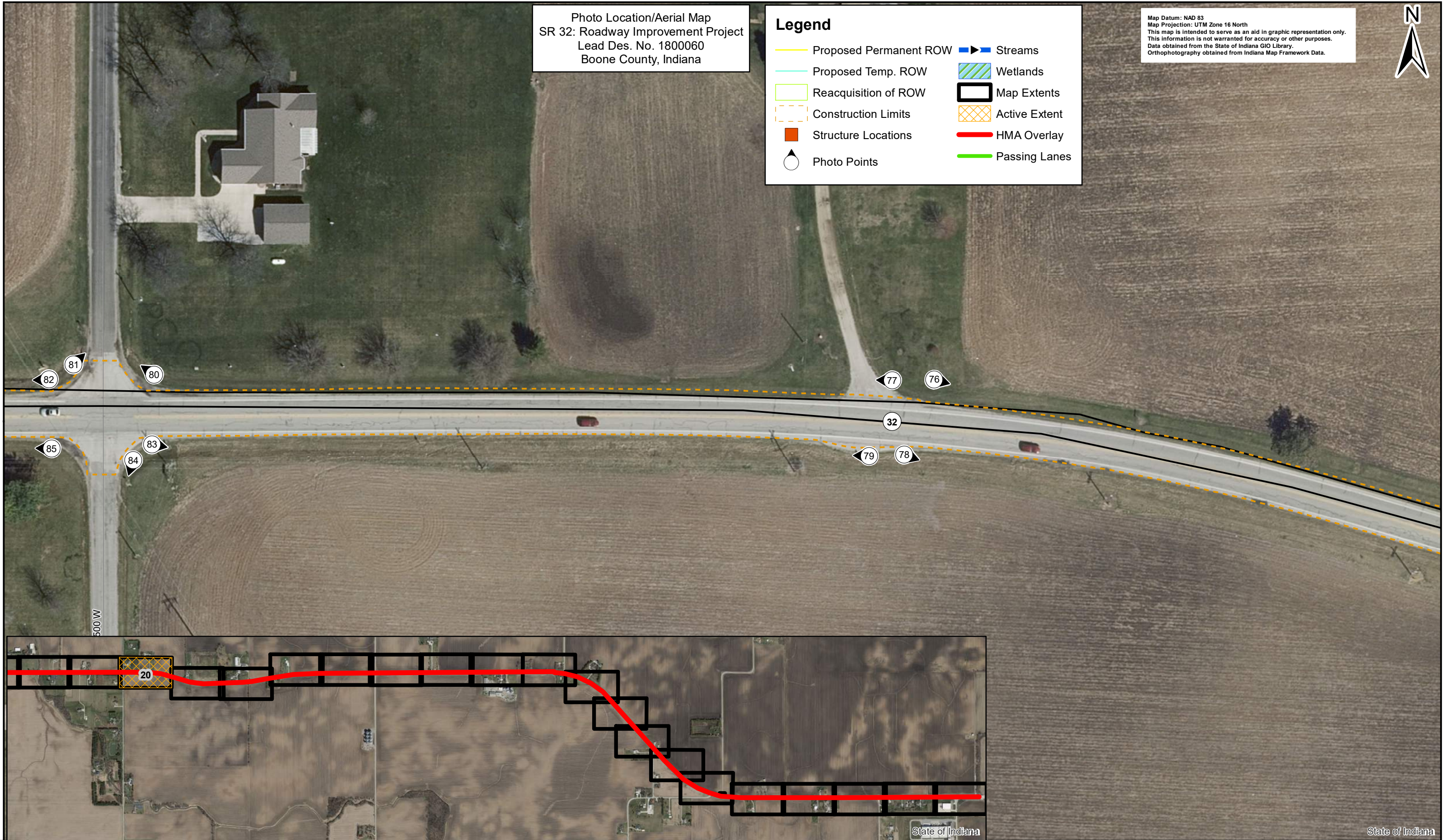


Photo Location/Aerial Map
SR 32: Roadway Improvement Project
Lead Des. No. 1800060
Boone County, Indiana

Legend

Proposed Permanent ROW

Proposed Temp. ROW

Reacquisition of ROW

Construction Limits

Structure Locations

Photo Points

Streams

Wetlands

Map Extents

Active Extent

HMA Overlay

Passing Lanes

Map Datum: NAD 83
Map Projection: UTM Zone 16 North
This map is intended to serve as an aid in graphic representation only.
This information is not warranted for accuracy or other purposes.
Data obtained from the State of Indiana GIO Library.
Orthophotography obtained from Indiana Map Framework Data.

Photo Location/Aerial Map 20 of 49

0

40

80

160

Feet

Location: SR 32
Township: Jefferson & Center
County: Boone

Lead Des No. 1800060

Appendix B: Graphics

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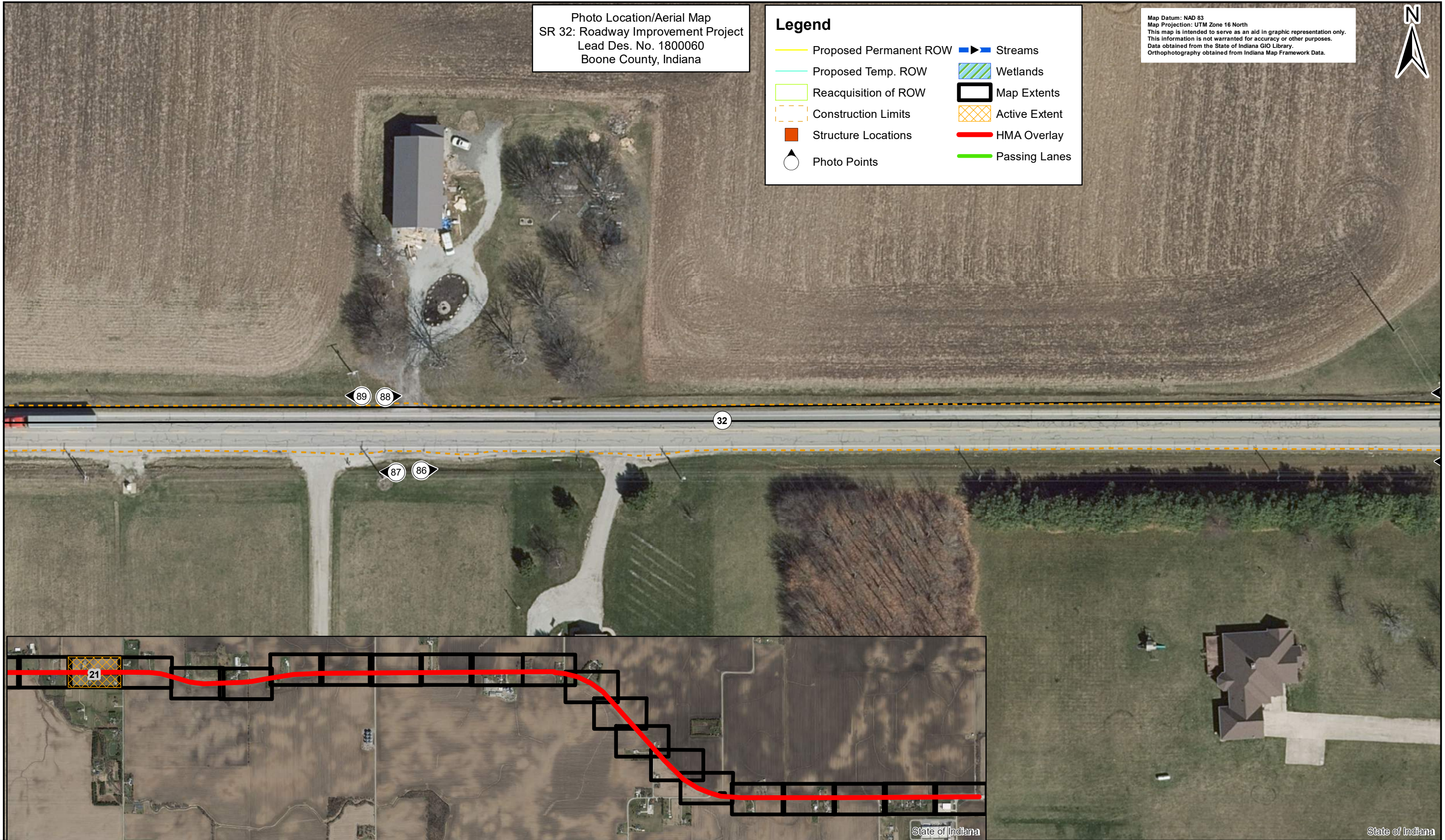


Photo Location/Aerial Map
SR 32: Roadway Improvement Project
Lead Des. No. 1800060
Boone County, Indiana

Legend

	Proposed Permanent ROW		Streams
	Proposed Temp. ROW		Wetlands
	Reacquisition of ROW		Map Extents
	Construction Limits		Active Extent
	Structure Locations		HMA Overlay
	Photo Points		Passing Lanes

Map Datum: NAD 83
Map Projection: UTM Zone 16 North
This map is intended to serve as an aid in graphic representation only.
This information is not warranted for accuracy or other purposes.
Data obtained from the State of Indiana GIO Library.
Orthophotography obtained from Indiana Map Framework Data.

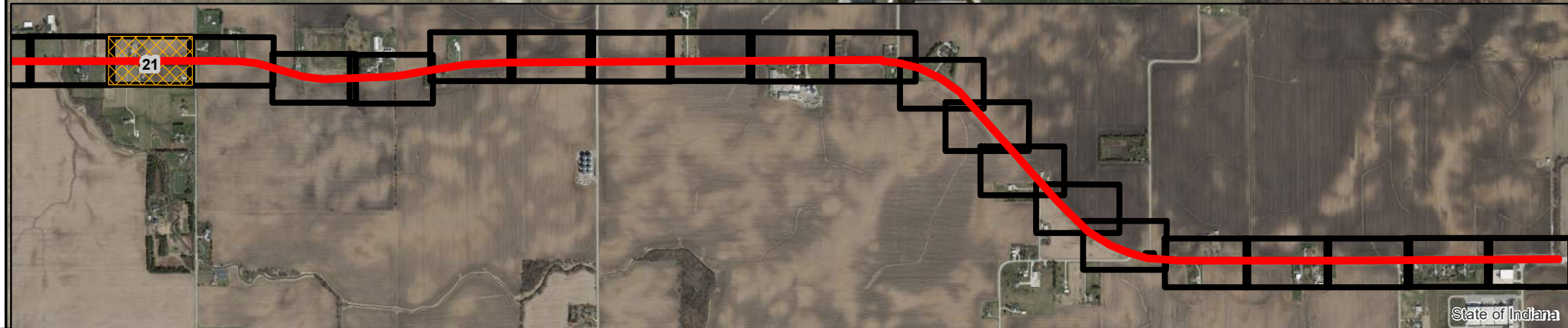
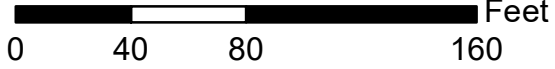


Photo Location/Aerial Map 21 of 49



Location: SR 32
Township: Jefferson & Center
County: Boone

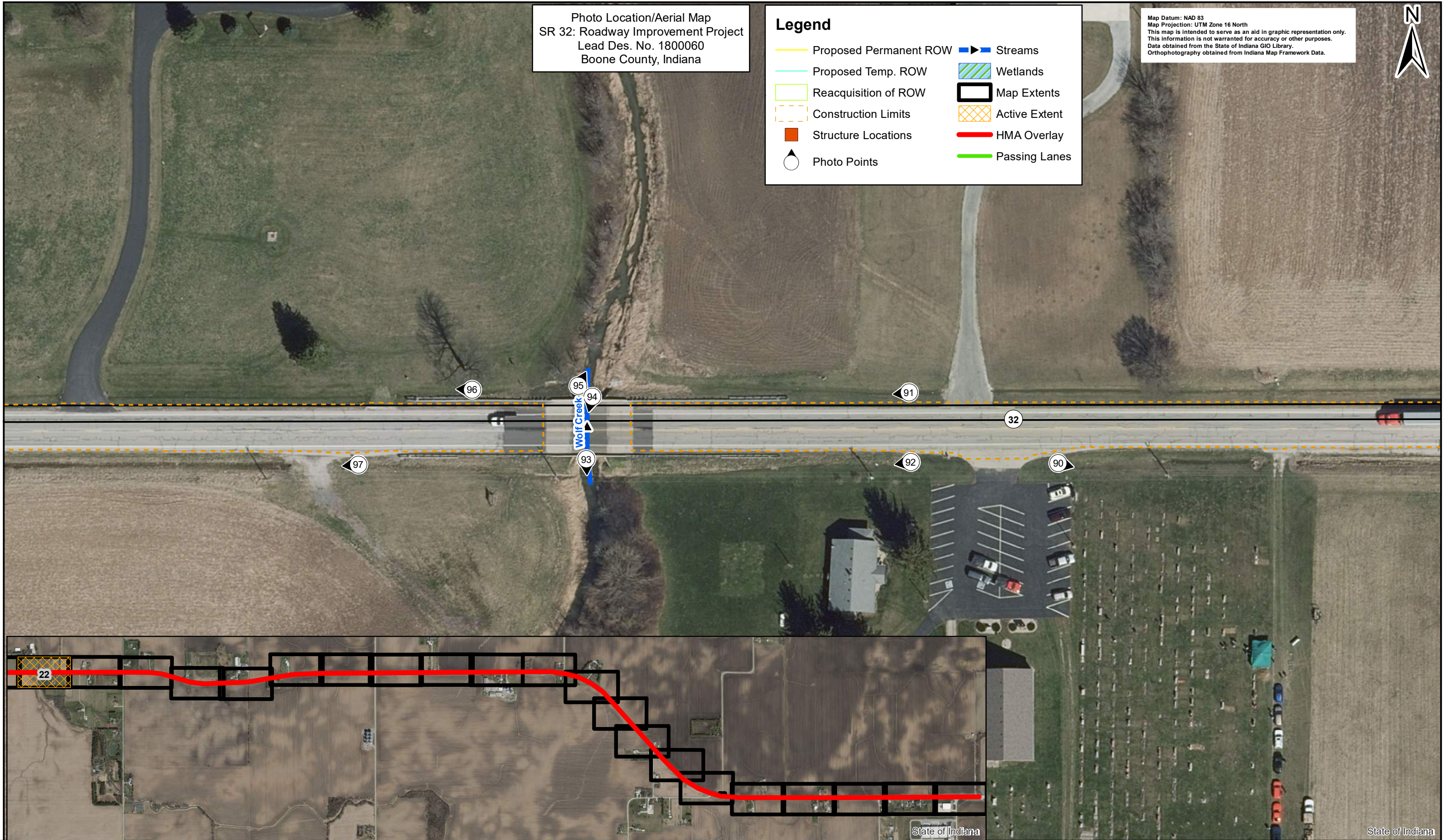


Photo Location/Aerial Map
SR 32: Roadway Improvement Project
Lead Des. No. 1800060
Boone County, Indiana

Legend

Proposed Permanent ROW

Proposed Temp. ROW

Reacquisition of ROW

Construction Limits

Structure Locations

Photo Points

Streams

Wetlands

Map Extents

Active Extent

HMA Overlay

Passing Lanes

Map Datum: NAD 83
Map Projection: UTM Zone 16 North
This map is intended to serve as an aid in graphic representation only.
This information is not warranted for accuracy or other purposes.
Data obtained from the State of Indiana GIO Library.
Orthophotography obtained from Indiana Map Framework Data.

Photo Location/Aerial Map 22 of 49

Location: SR 32
Township: Jefferson & Center
County: Boone

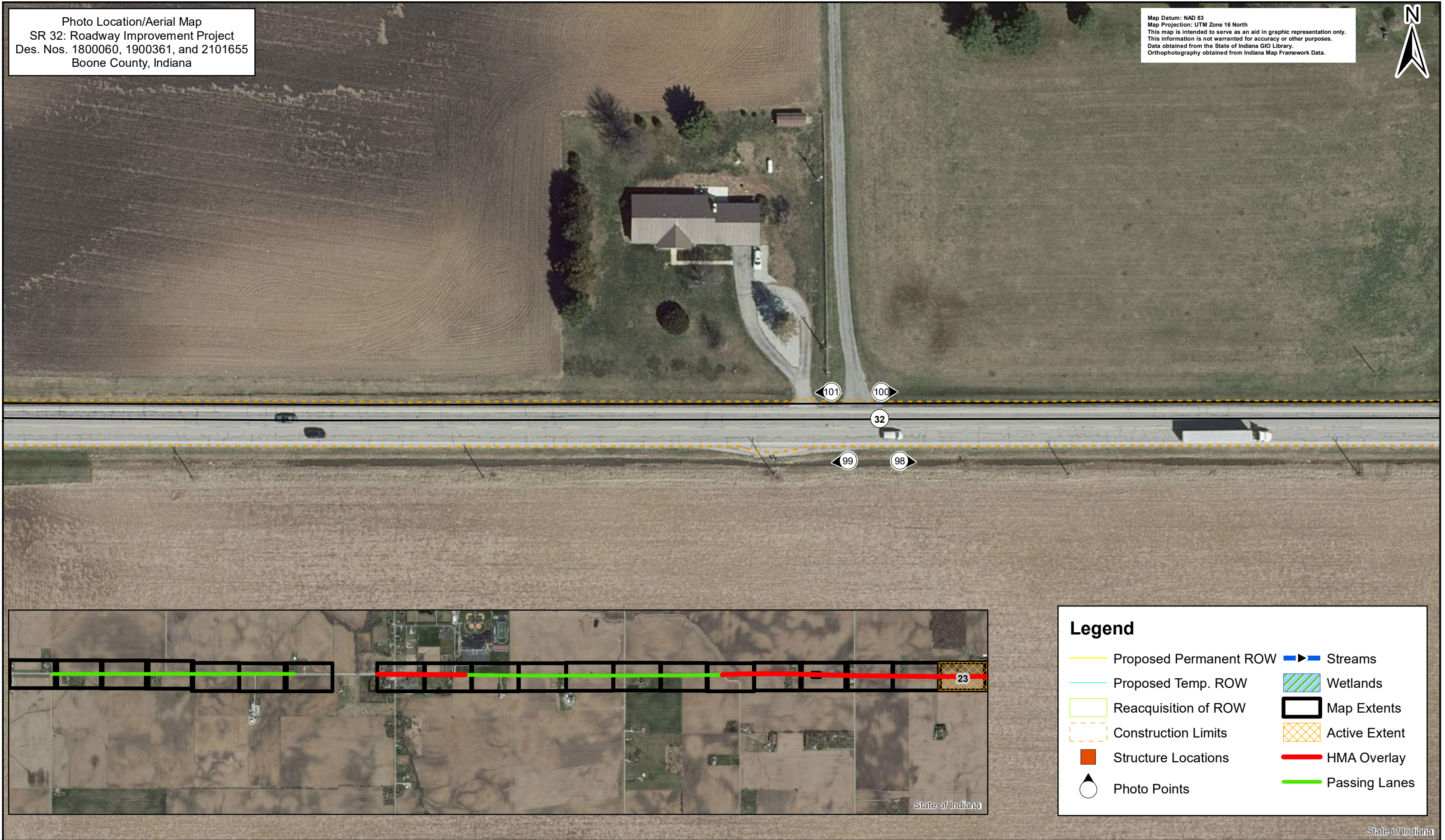
Lead Des No. 1800060

Appendix B: Graphics

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Photo Location/Aerial Map
SR 32: Roadway Improvement Project
Des. Nos. 1800060, 1900361, and 2101655
Boone County, Indiana

Map Datum: NAD 83
Map Projection: UTM Zone 16 North
This map is intended to serve as an aid in graphic representation only.
This information is not warranted for accuracy or other purposes.
Data obtained from the State of Indiana GIO Library.
Orthophotography obtained from Indiana Map Framework Data.

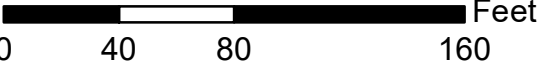


Legend

- | | |
|---------------------------|-----------------|
| — Proposed Permanent ROW | ▬ Streams |
| — Proposed Temp. ROW | ▨ Wetlands |
| ▭ Reacquisition of ROW | ▭ Map Extents |
| - - - Construction Limits | ▨ Active Extent |
| ■ Structure Locations | — HMA Overlay |
| ● Photo Points | — Passing Lanes |



Photo Location/Aerial Map 23 of 49

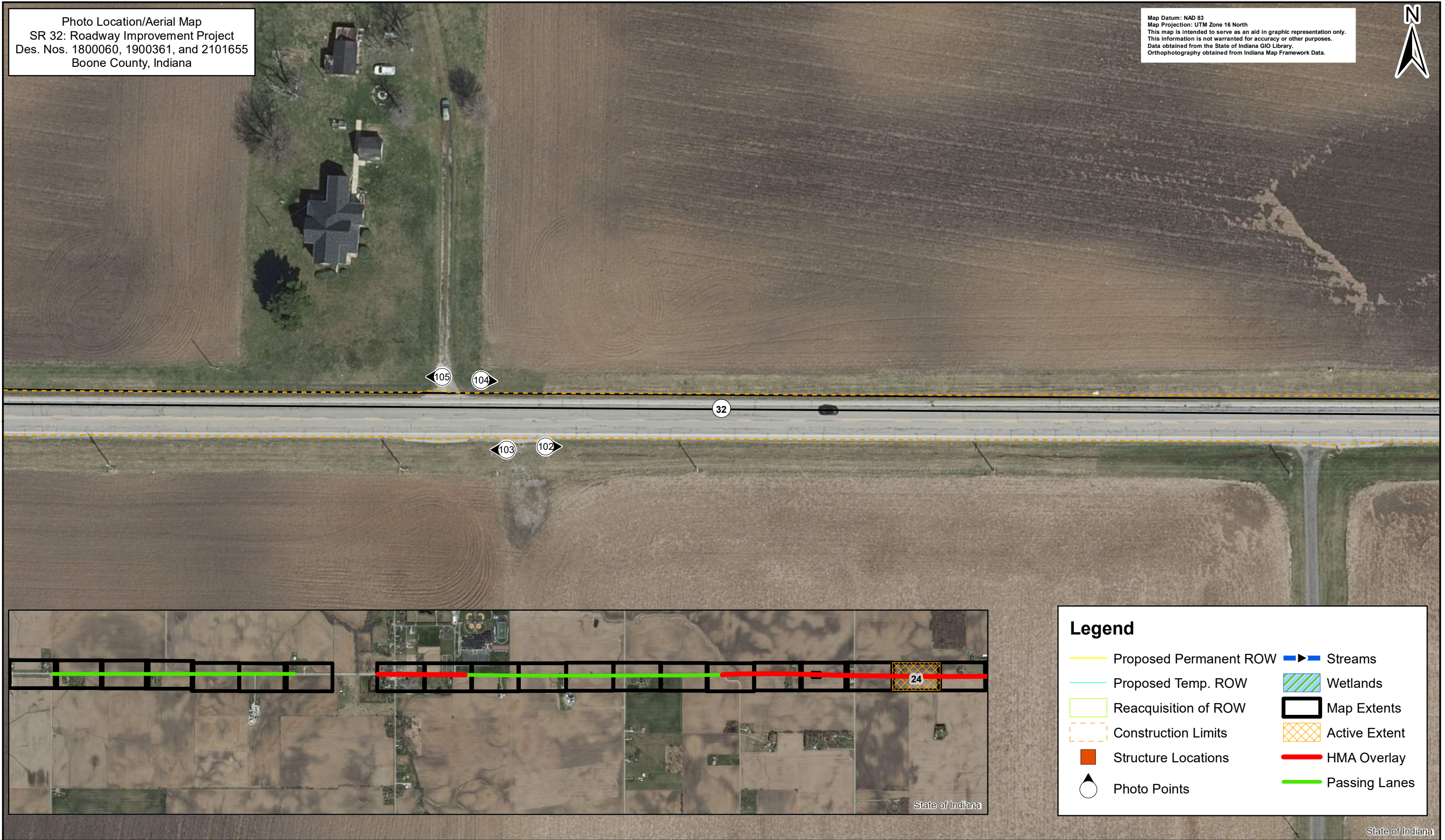


Location: SR 32
Township: Jefferson & Center
County: Boone

State of Indiana

Photo Location/Aerial Map
SR 32: Roadway Improvement Project
Des. Nos. 1800060, 1900361, and 2101655
Boone County, Indiana

Map Datum: NAD 83
Map Projection: UTM Zone 16 North
This map is intended to serve as an aid in graphic representation only.
This information is not warranted for accuracy or other purposes.
Data obtained from the State of Indiana GIO Library.
Orthophotography obtained from Indiana Map Framework Data.



Legend

Proposed Permanent ROW

Proposed Temp. ROW

Reacquisition of ROW

Construction Limits

Structure Locations

Photo Points

Streams

Wetlands

Map Extents

Active Extent

HMA Overlay

Passing Lanes

Photo Location/Aerial Map 24 of 49

Location: SR 32
Township: Jefferson & Center
County: Boone

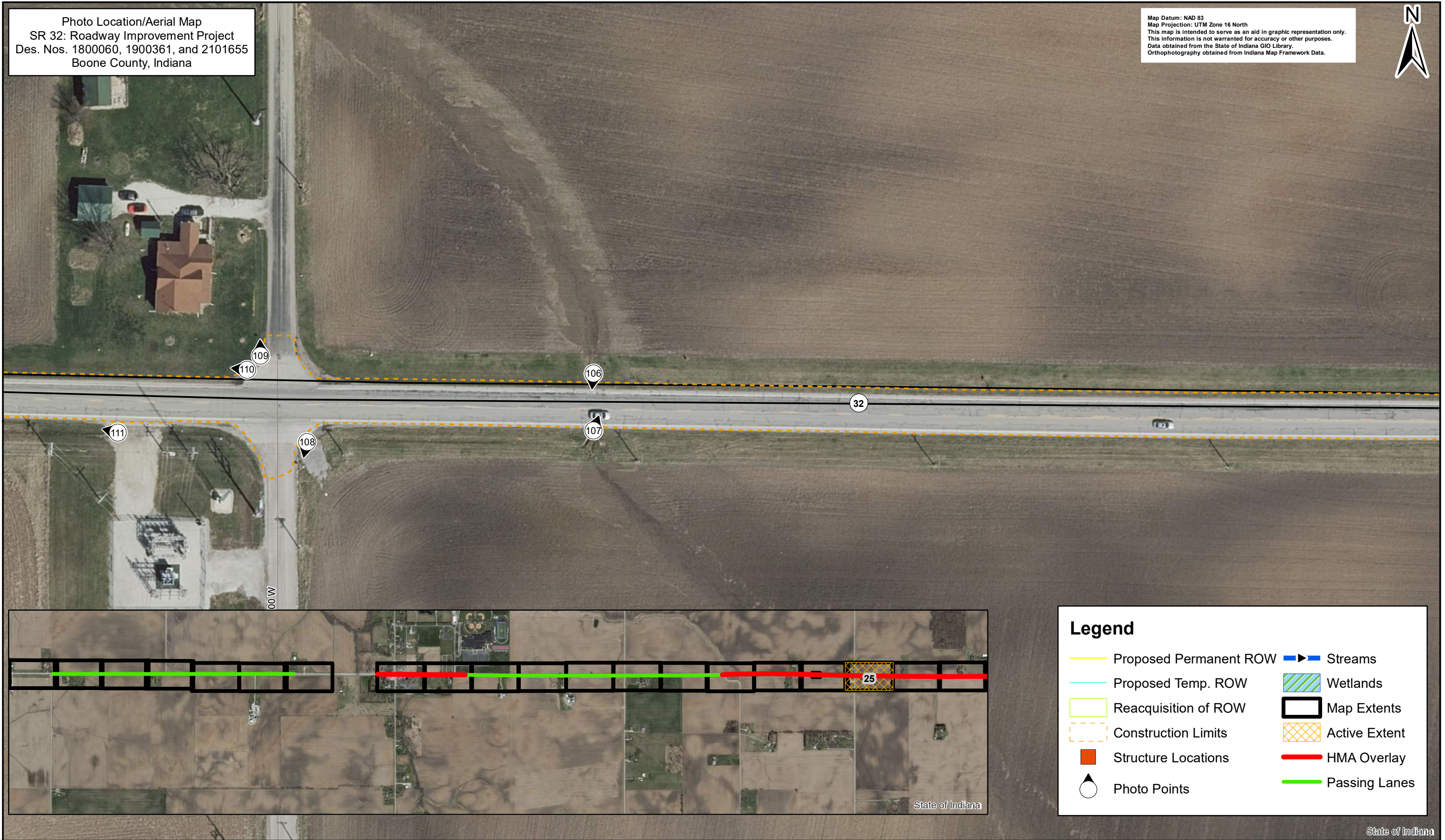
Lead Des No. 1800060

Appendix B: Graphics

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Photo Location/Aerial Map
SR 32: Roadway Improvement Project
Des. Nos. 1800060, 1900361, and 2101655
Boone County, Indiana

Map Datum: NAD 83
Map Projection: UTM Zone 16 North
This map is intended to serve as an aid in graphic representation only.
This information is not warranted for accuracy or other purposes.
Data obtained from the State of Indiana GIO Library.
Orthophotography obtained from Indiana Map Framework Data.

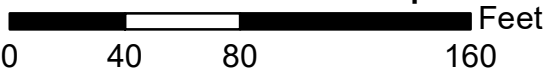


Legend

- | | |
|---------------------------|-----------------|
| — Proposed Permanent ROW | ▸ Streams |
| — Proposed Temp. ROW | ▨ Wetlands |
| ▭ Reacquisition of ROW | ▭ Map Extents |
| - - - Construction Limits | ▨ Active Extent |
| ■ Structure Locations | — HMA Overlay |
| ● Photo Points | — Passing Lanes |



Photo Location/Aerial Map 25 of 49



Location: SR 32
Township: Jefferson & Center
County: Boone

Photo Location/Aerial Map
SR 32: Roadway Improvement Project
Des. Nos. 1800060, 1900361, and 2101655
Boone County, Indiana

Map Datum: NAD 83
Map Projection: UTM Zone 16 North
This map is intended to serve as an aid in graphic representation only.
This information is not warranted for accuracy or other purposes.
Data obtained from the State of Indiana GIO Library.
Orthophotography obtained from Indiana Map Framework Data.



Legend

Proposed Permanent ROW

Proposed Temp. ROW

Reacquisition of ROW

Construction Limits

Structure Locations

Photo Points

Streams

Wetlands

Map Extents

Active Extent

HMA Overlay

Passing Lanes

State of Indiana

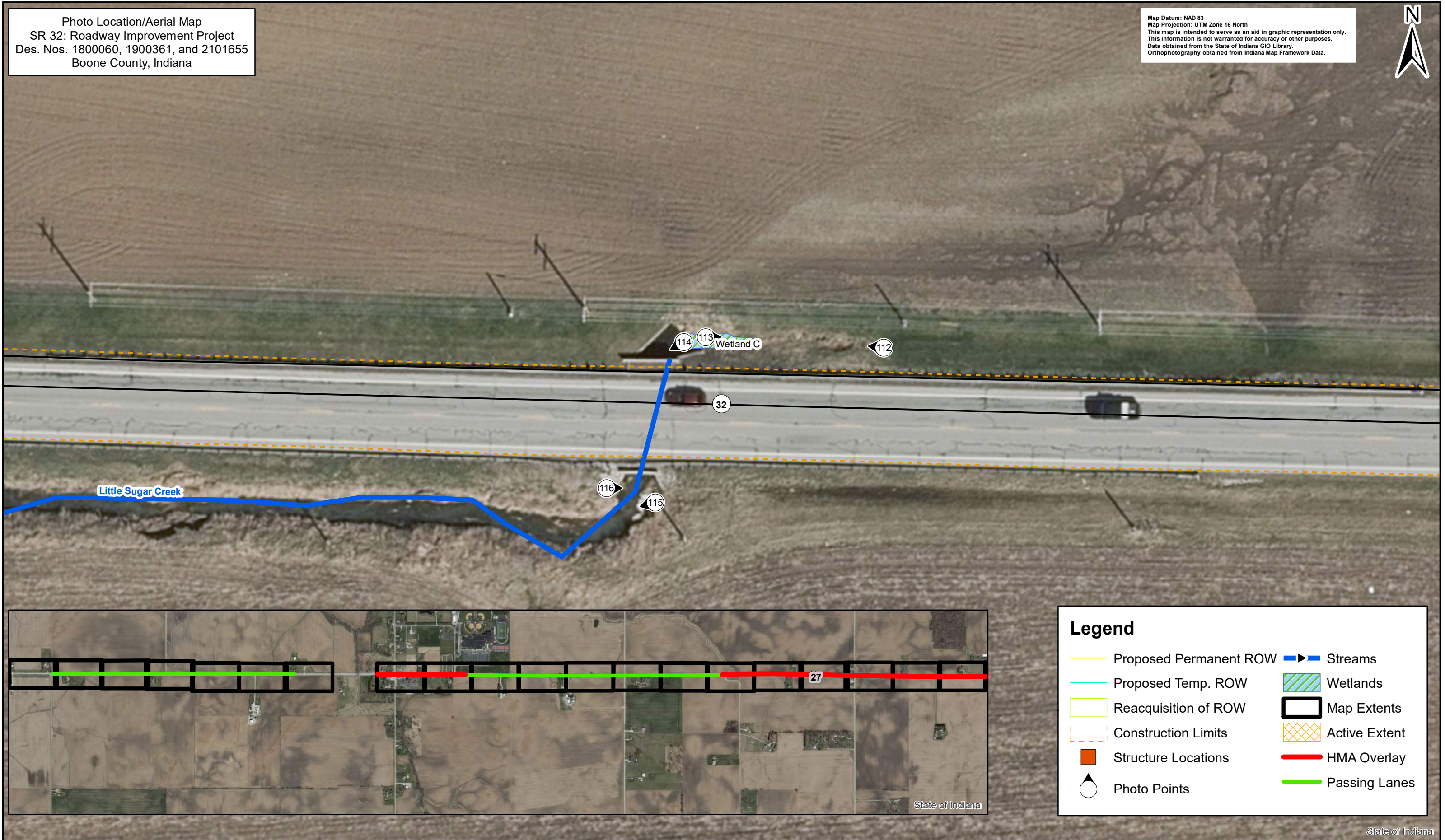
Photo Location/Aerial Map 26 of 49

Location: SR 32
Township: Jefferson & Center
County: Boone

Lead Des No. 1800060

Appendix B: Graphics

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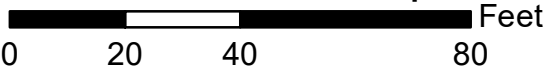


Legend

- | | |
|--------------------------|---------------|
| — Proposed Permanent ROW | —> Streams |
| — Proposed Temp. ROW | Wetlands |
| Reacquisition of ROW | Map Extents |
| Construction Limits | Active Extent |
| Structure Locations | HMA Overlay |
| Photo Points | Passing Lanes |



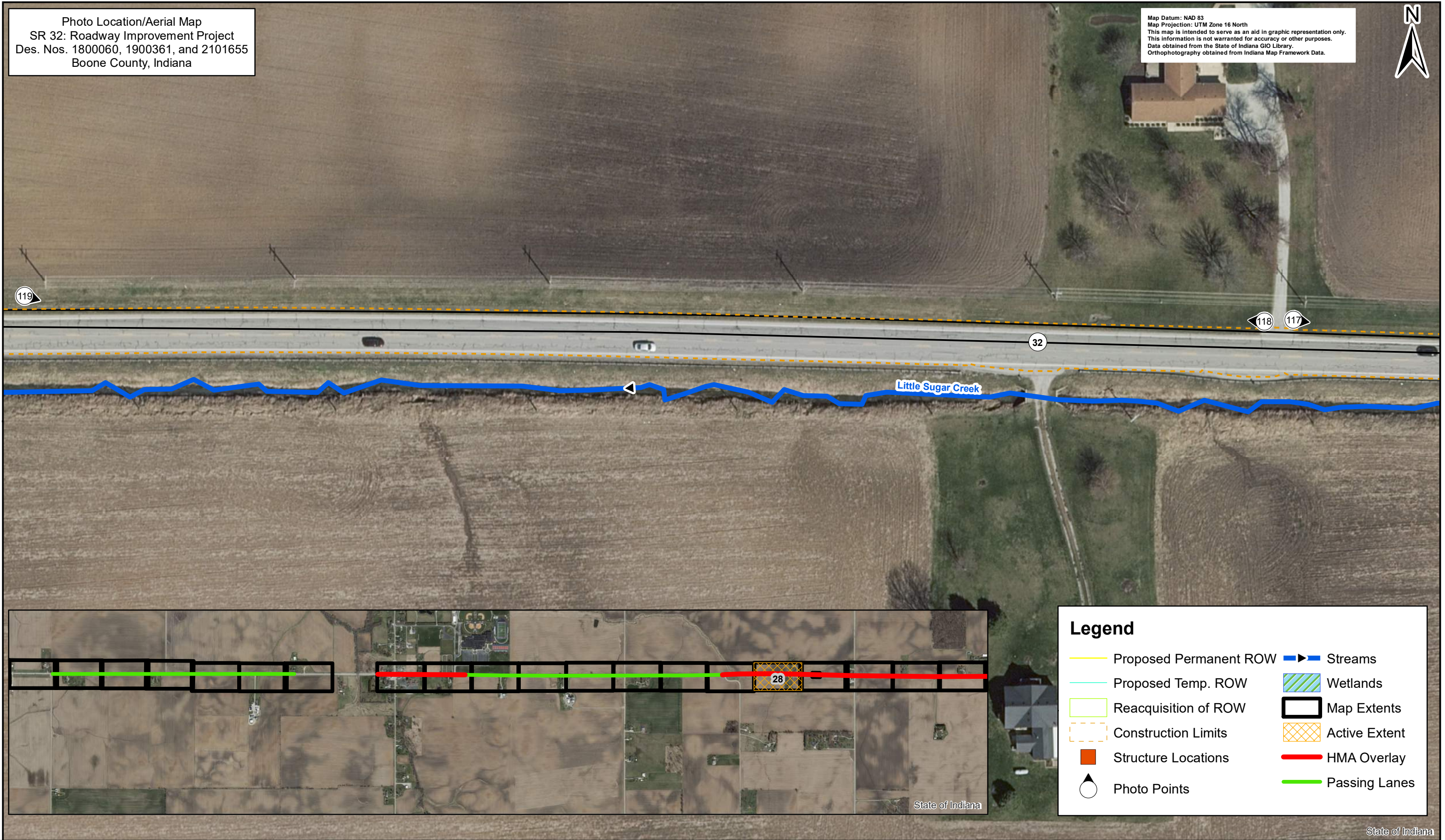
Photo Location/Aerial Map 27 of 49



Location: SR 32
Township: Jefferson & Center
County: Boone

Photo Location/Aerial Map
SR 32: Roadway Improvement Project
Des. Nos. 1800060, 1900361, and 2101655
Boone County, Indiana

Map Datum: NAD 83
Map Projection: UTM Zone 16 North
This map is intended to serve as an aid in graphic representation only.
This information is not warranted for accuracy or other purposes.
Data obtained from the State of Indiana GIO Library.
Orthophotography obtained from Indiana Map Framework Data.

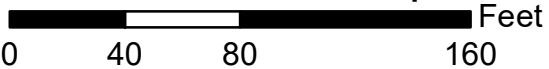


Legend

- | | |
|--------------------------|---------------|
| — Proposed Permanent ROW | —> Streams |
| — Proposed Temp. ROW | Wetlands |
| Reacquisition of ROW | Map Extents |
| Construction Limits | Active Extent |
| Structure Locations | HMA Overlay |
| Photo Points | Passing Lanes |



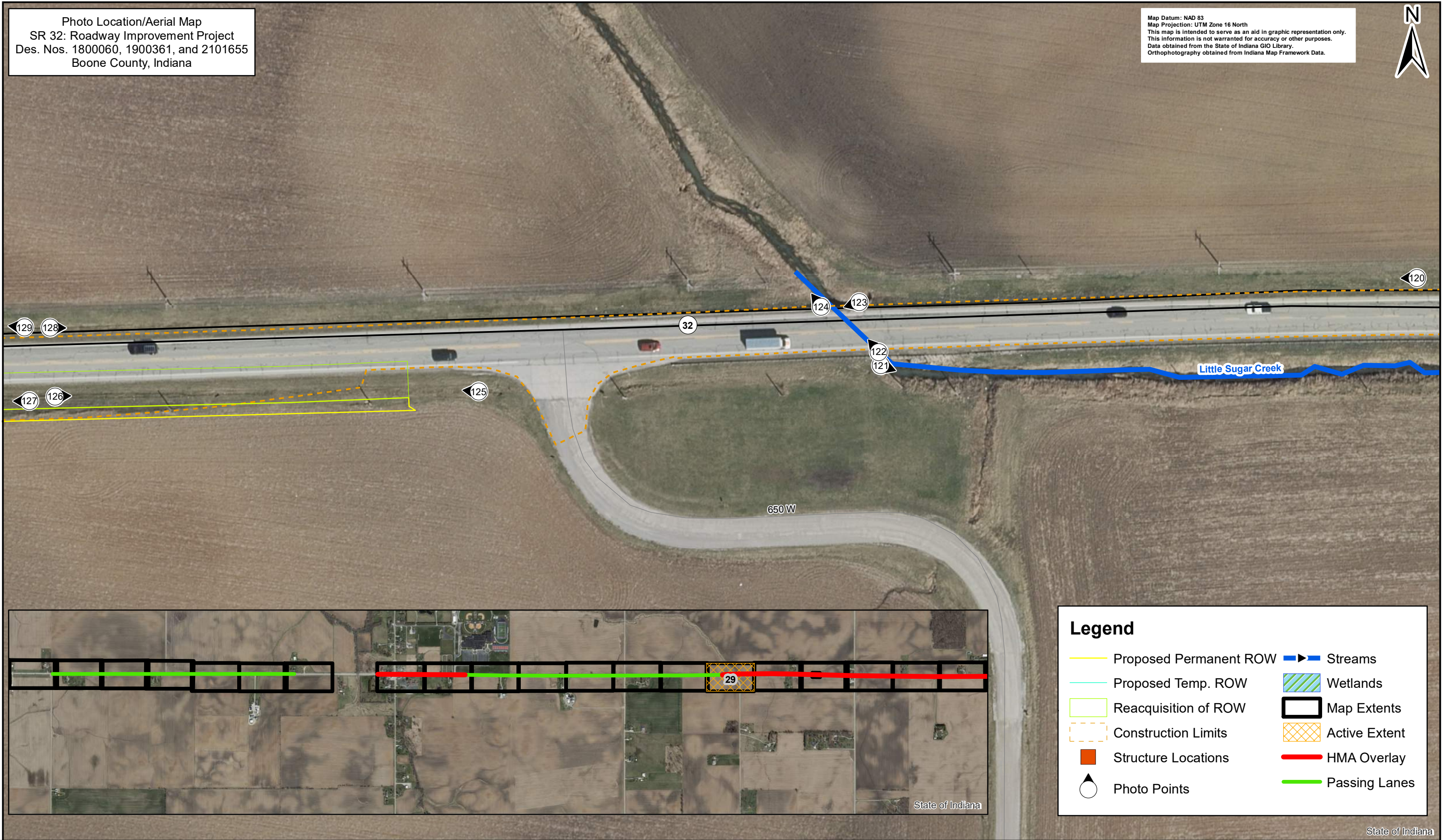
Photo Location/Aerial Map 28 of 49



Location: SR 32
Township: Jefferson & Center
County: Boone

Photo Location/Aerial Map
SR 32: Roadway Improvement Project
Des. Nos. 1800060, 1900361, and 2101655
Boone County, Indiana

Map Datum: NAD 83
Map Projection: UTM Zone 16 North
This map is intended to serve as an aid in graphic representation only.
This information is not warranted for accuracy or other purposes.
Data obtained from the State of Indiana GIO Library.
Orthophotography obtained from Indiana Map Framework Data.



Legend

Proposed Permanent ROW

Proposed Temp. ROW

Reacquisition of ROW

Construction Limits

Structure Locations

Photo Points

Streams

Wetlands

Map Extents

Active Extent

HMA Overlay

Passing Lanes




Photo Location/Aerial Map 29 of 49

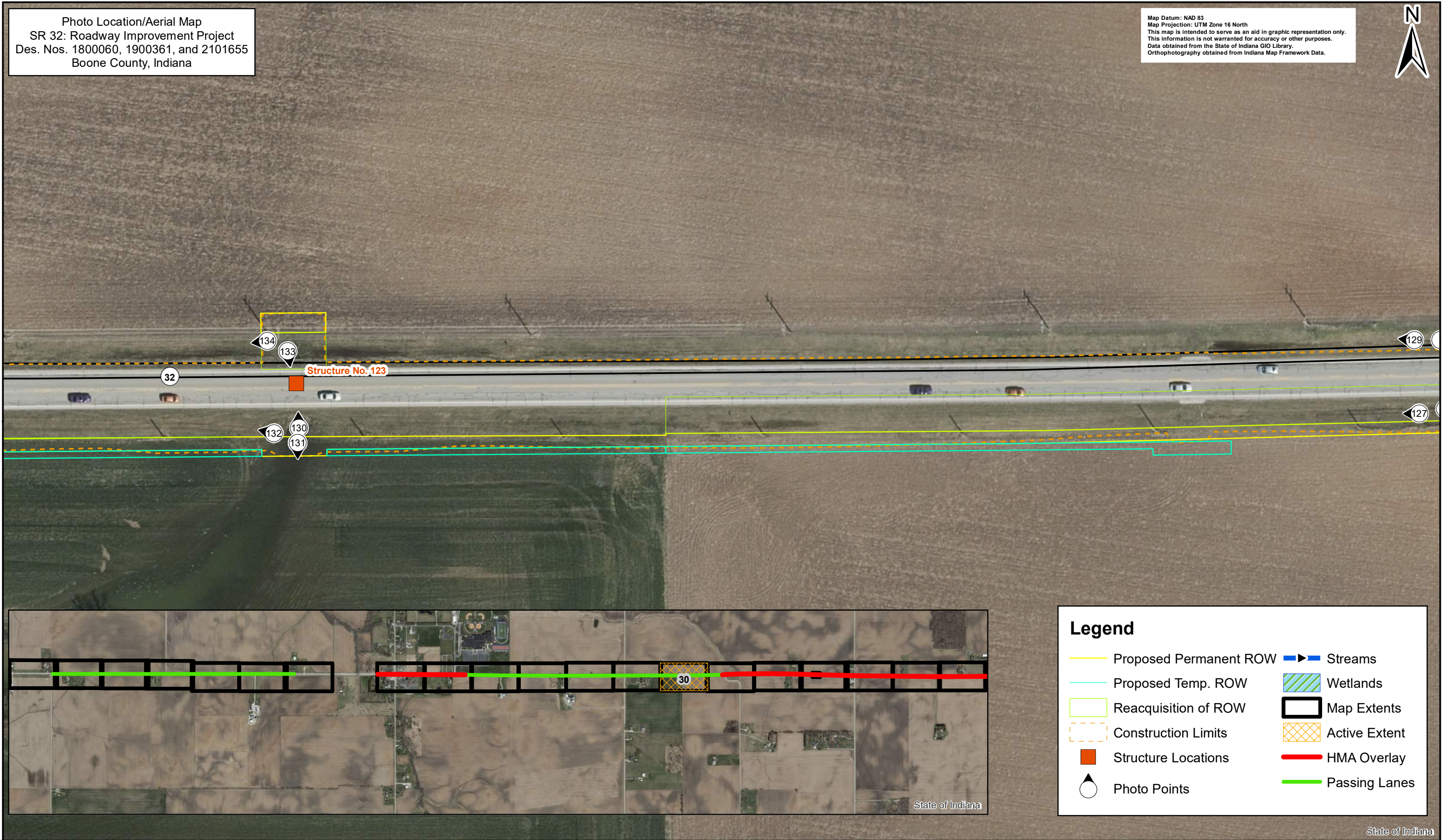
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Location: SR 32
Township: Jefferson & Center
County: Boone

Lead Des No. 1800060

Appendix B: Graphics

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Legend

Proposed Permanent ROW

Proposed Temp. ROW

Reacquisition of ROW

Construction Limits

Structure Locations

Photo Points

Streams

Wetlands

Map Extents

Active Extent

HMA Overlay

Passing Lanes




Photo Location/Aerial Map 30 of 49

0

40

80

160

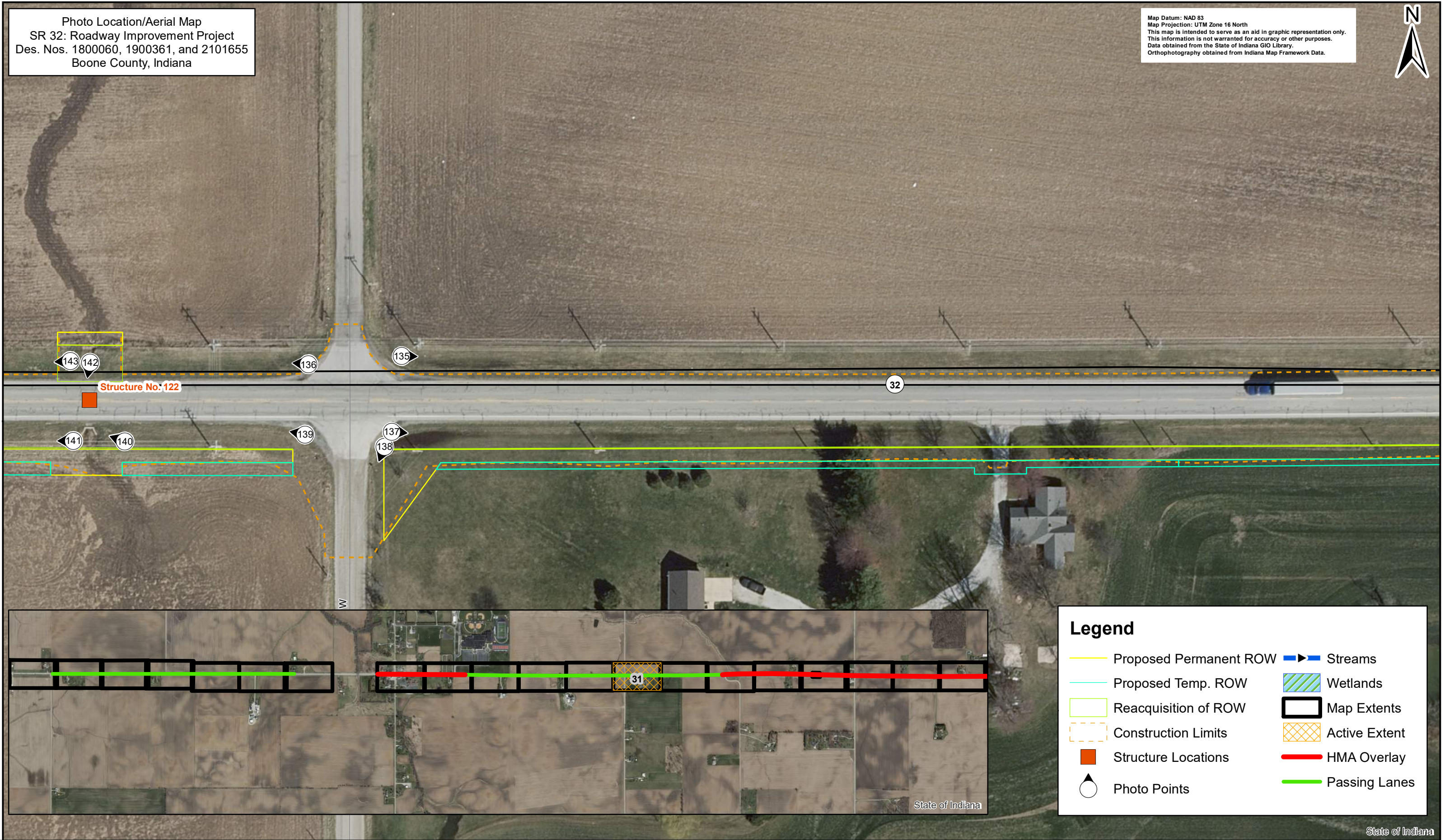
Feet

Location: SR 32
Township: Jefferson & Center
County: Boone

Lead Des No. 1800060

Appendix B: Graphics

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Legend

Proposed Permanent ROW

Proposed Temp. ROW

Reacquisition of ROW

Construction Limits

Structure Locations

Photo Points

Streams

Wetlands

Map Extents

Active Extent

HMA Overlay

Passing Lanes

Photo Location/Aerial Map 31 of 49

0 40 80 160 Feet

Location: SR 32
Township: Jefferson & Center
County: Boone

Lead Des No. 1800060

Appendix B: Graphics

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Photo Location/Aerial Map
SR 32: Roadway Improvement Project
Des. Nos. 1800060, 1900361, and 2101655
Boone County, Indiana

Map Datum: NAD 83
Map Projection: UTM Zone 16 North
This map is intended to serve as an aid in graphic representation only.
This information is not warranted for accuracy or other purposes.
Data obtained from the State of Indiana GIO Library.
Orthophotography obtained from Indiana Map Framework Data.

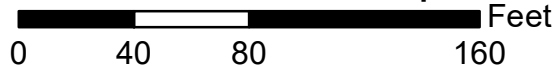


Legend

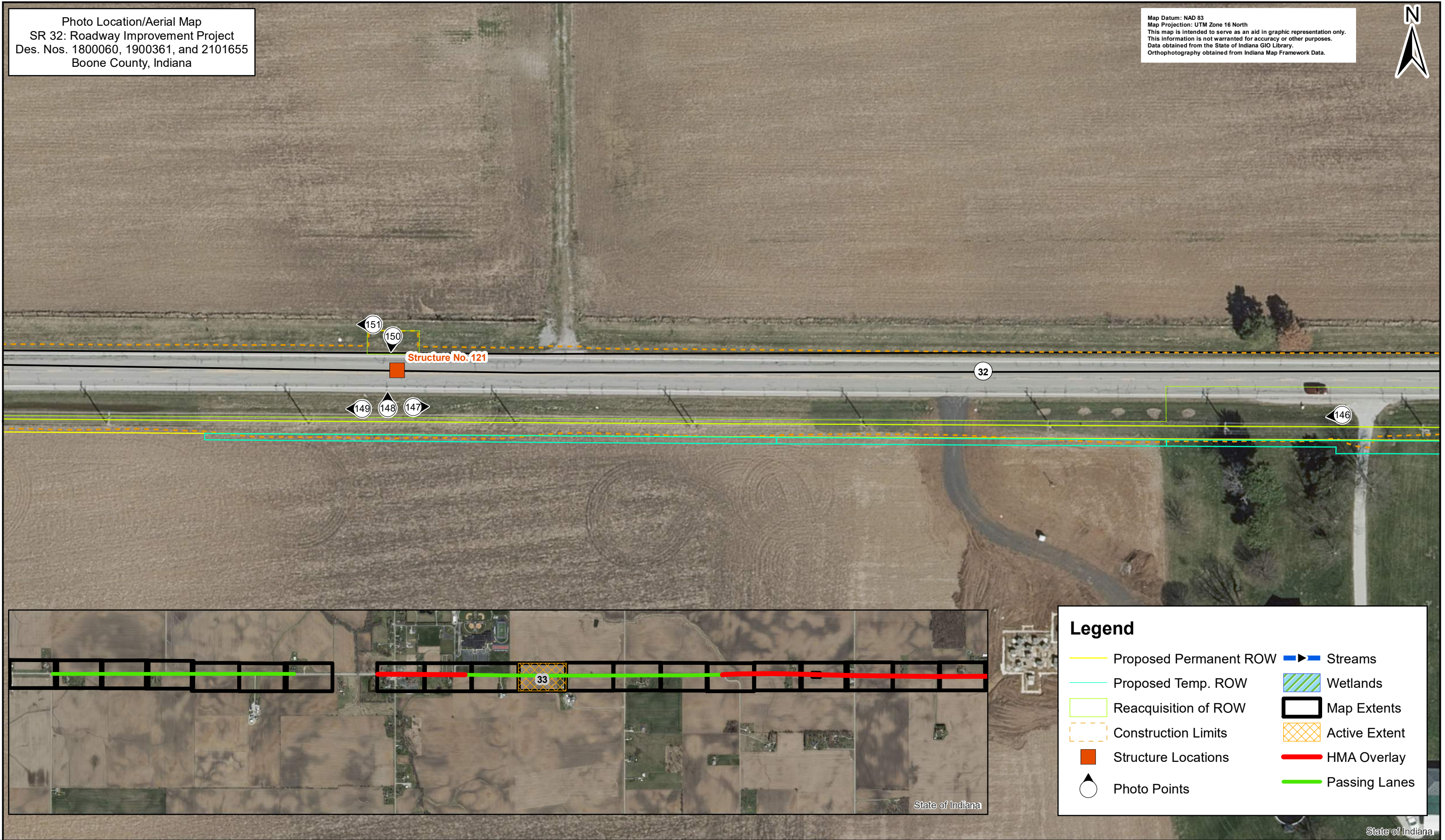
- | | |
|---------------------------|-----------------|
| — Proposed Permanent ROW | ▬ Streams |
| — Proposed Temp. ROW | ▨ Wetlands |
| ▭ Reacquisition of ROW | ▭ Map Extents |
| - - - Construction Limits | ▨ Active Extent |
| ■ Structure Locations | — HMA Overlay |
| ○ Photo Points | — Passing Lanes |



Photo Location/Aerial Map 32 of 49

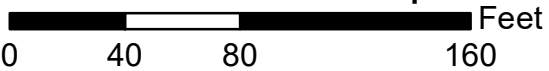


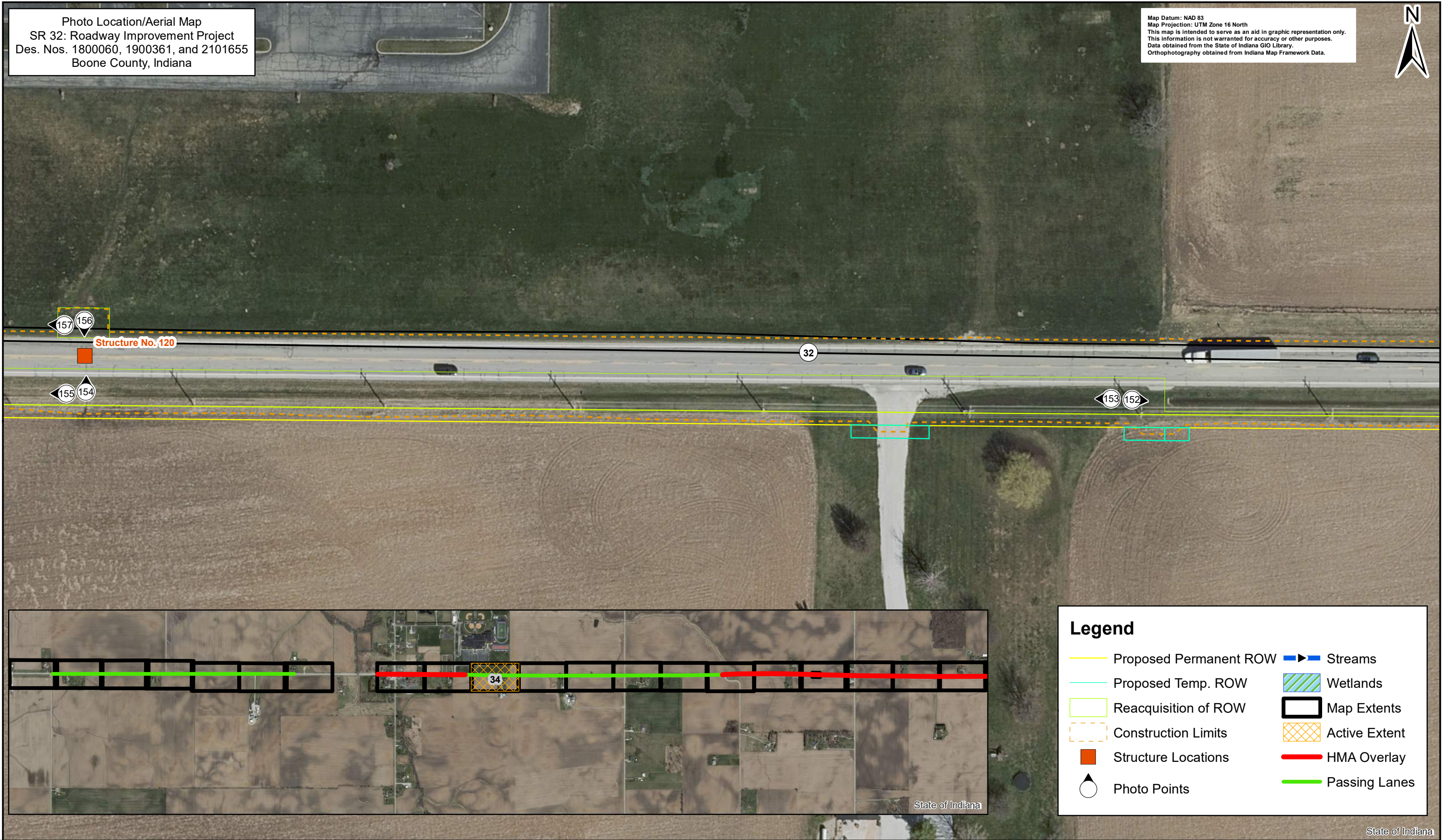
Location: SR 32
Township: Jefferson & Center
County: Boone



Legend

- | | |
|---------------------------|-----------------|
| — Proposed Permanent ROW | ▬ Streams |
| — Proposed Temp. ROW | ▨ Wetlands |
| ▭ Reacquisition of ROW | ▭ Map Extents |
| - - - Construction Limits | ▨ Active Extent |
| ■ Structure Locations | — HMA Overlay |
| ○ Photo Points | — Passing Lanes |





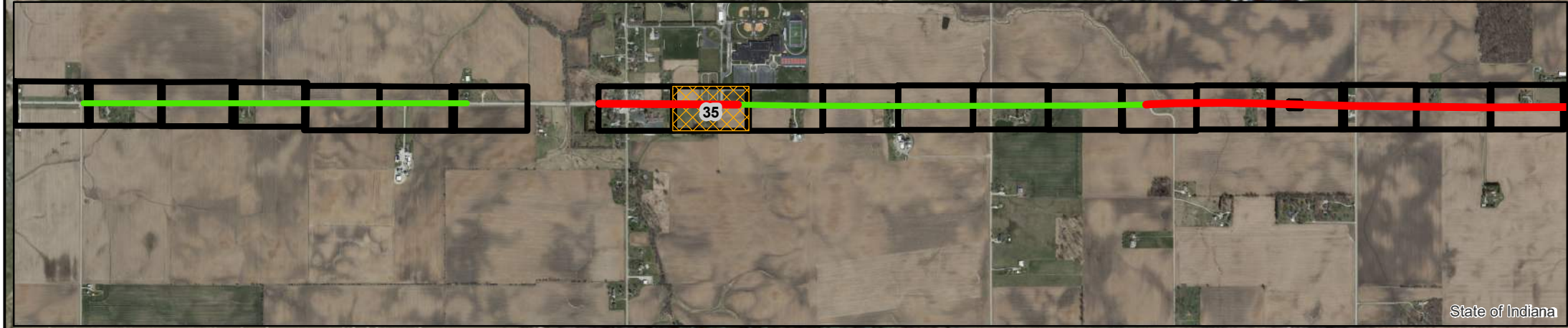
Legend

- Proposed Permanent ROW
- Proposed Temp. ROW
- Reacquisition of ROW
- Construction Limits
- Structure Locations
- Photo Points
- Streams
- Wetlands
- Map Extents
- Active Extent
- HMA Overlay
- Passing Lanes



Photo Location/Aerial Map
SR 32: Roadway Improvement Project
Des. Nos. 1800060, 1900361, and 2101655
Boone County, Indiana

Map Datum: NAD 83
Map Projection: UTM Zone 16 North
This map is intended to serve as an aid in graphic representation only.
This information is not warranted for accuracy or other purposes.
Data obtained from the State of Indiana GIO Library.
Orthophotography obtained from Indiana Map Framework Data.



Legend

Proposed Permanent ROW

Proposed Temp. ROW

Reacquisition of ROW

Construction Limits

Structure Locations

Photo Points

Streams

Wetlands

Map Extents

Active Extent

HMA Overlay

Passing Lanes

Photo Location/Aerial Map 35 of 49

Location: SR 32
Township: Jefferson & Center
County: Boone

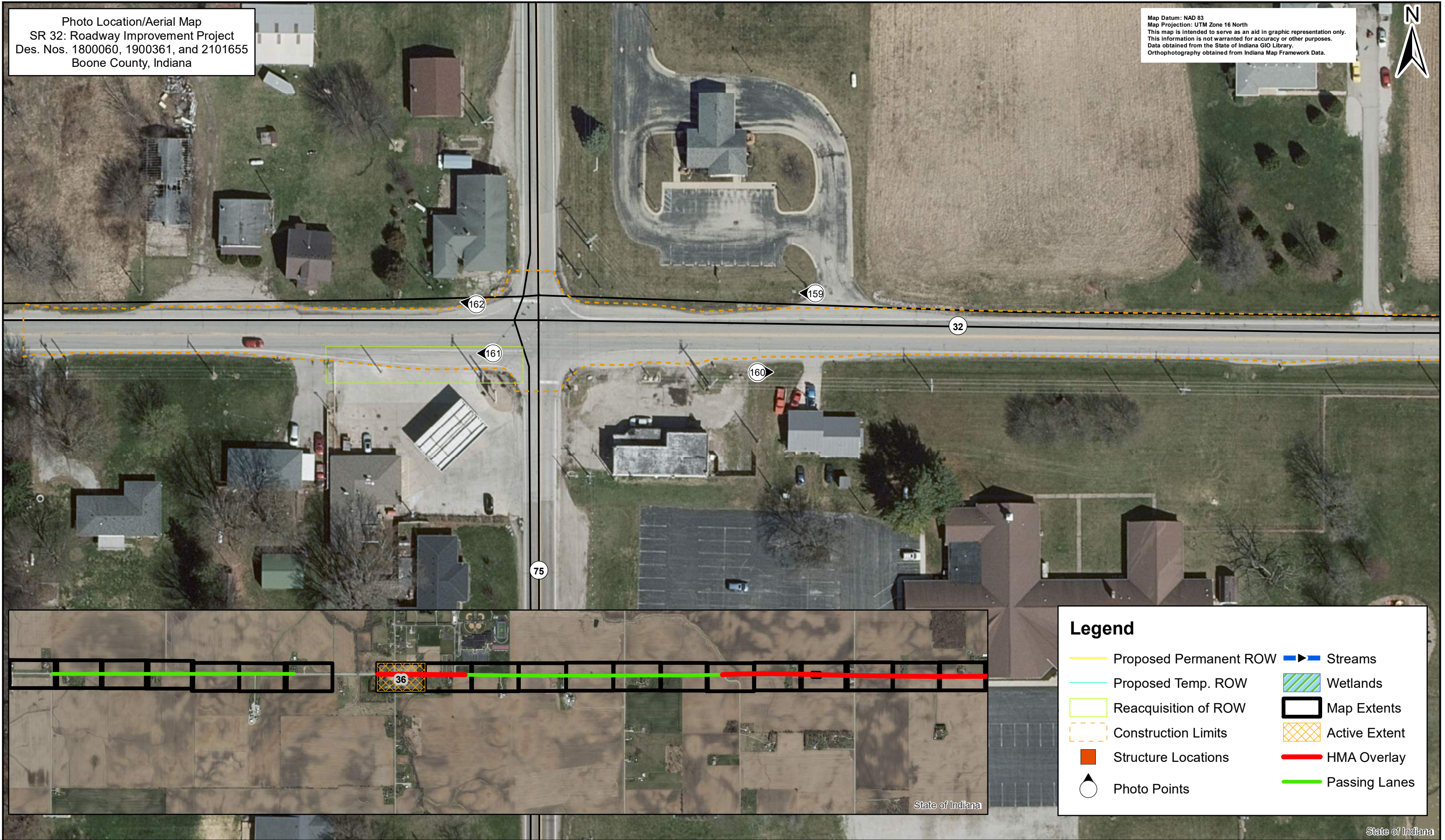
Lead Des No. 1800060

Appendix B: Graphics

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Photo Location/Aerial Map
SR 32: Roadway Improvement Project
Des. Nos. 1800060, 1900361, and 2101655
Boone County, Indiana

Map Datum: NAD 83
Map Projection: UTM Zone 16 North
This map is intended to serve as an aid in graphic representation only.
This information is not warranted for accuracy or other purposes.
Data obtained from the State of Indiana GIO Library.
Orthophotography obtained from Indiana Map Framework Data.

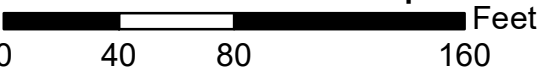


Legend

- | | |
|---------------------------|---------------|
| — Proposed Permanent ROW | —> Streams |
| — Proposed Temp. ROW | Wetlands |
| — Reacquisition of ROW | Map Extents |
| - - - Construction Limits | Active Extent |
| Structure Locations | HMA Overlay |
| Photo Points | Passing Lanes |



Photo Location/Aerial Map 36 of 49



Location: SR 32
Township: Jefferson & Center
County: Boone